

NEW WORLDS SCIENCE FICTION

No. 53

2/-



Jerry

NEW WORLDS

— PROFILES —

Terry

Artist

Surrey



"Terry" is the Christian name of an artist very well known in other circles—notably that of astronomy—who has become extremely interested in the close connection between science and science fiction during recent years. He says that "At present I have given painting and drawing a twenty years trial as a means of livelihood and am still trying to make up my mind whether it is worth taking up as a permanent career."

His first illustration in the fantasy field was for a national paper who wanted a futuristic illustration of Trafalgar Square in 2137 A.D. Since then he has appeared in many other national weeklies—his most recent being the satellite illustration in *Everybody's* for the Kenneth Gatland article, and he will shortly have a book published on the Solar System in which he has written the text and profusely illustrated it in colour.

Much of his time is spent in his own optical workshop where he produces 4½ ins. and 6 ins. telescopes and cameras for private astronomical research and where he is at present modifying a Littrow type spectrophotograph.

Concerning science fiction he says, "I like that kind which has a reasonably convincing social background—"Fair" in the March *New Worlds* was most enjoyable. I dislike those writers who cram their stories with a mass of technical back-chat rightly belonging to a scientific paper—and I hope that I never have to object to anyone *espousing* in my studio."

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Stories dealing with robots have been a basic background to science fiction for many years and we have had a fair share of them lately in this magazine. However, John Kippox's latest is one that we felt we had to publish—it has a double approach in its interest to both robotics and child psychology

WE'RE ONLY HUMAN

By John Kippox

Between Ed Santor and his grandson Billy Santor existed an understanding which had its foundation in Billy's very early life, when for six months the grandparents had looked after the infant while his father George was away on corporation work and his mother was in hospital. The boy was more to Ed than most children are to their grandparents: they had, indeed, achieved the friendship of silence, that state of happy companionship in which words were often unnecessary. So when Billy arrived at the old house with its big untidy garden, its many sheds and its huge workshop, he didn't knock. He just walked right in. It was good that Billy liked walking too, for the house stood half a mile from the farthest limit of city development, and thus it was that distance from the end of the city car service. That was one reason why it suited Gramp Santor: after a life spent with technical and robot work, he figured that once in this place, he would be finished with the world before the city expanded any more and got around to trying to organise him.

He was in the workshop when he heard Billy holloo in the house, and he holloosed right back. He was a spry, kindly man of seventy-five, quick as a rock lizard and with the heart of a boy in many things. He watched from the murky big window, and saw Billy coming down the path between the hibiscus bushes, not skipping or running as he often did, but walking as though he was having a little difficulty in

holding up his head. The unhappiness in the boy's manner communicated itself to the old man. Billy wandered in at the door with the evening sunlight behind him and smiled rather uncertainly.

"Hi, Gramp."

"Hi, Billy boy. You're over early: done all that homework?"

"Not all that much to do."

"Well," said Gramp. He pushed things about on the bench, feeling not too happy himself. "Well, then—how's everything at home?"

"Oh, all right," replied Billy, and thus signalled clearly to Ed Santor that things were not all right. But the old man made a non-committal noise, watched the boy as his gaze roved over the jumble of electronic gear and robot pieces with which Gramp amused himself when he wasn't fishing, and knew that the reason for Billy's manner would appear shortly. The reason for the visit too, maybe, though there didn't have to be a special one.

"Gramp," he said, "Mom's got her robot."

Ed Santor's face lit up.

"Gee," he said, "that's fine! A genuine multiple aptitudes job. That's a long time she's been waiting for that. Now she can rest easy: had a hard time, one way and another, Billy."

"Yes." Billy looked at the wall, his lips pursed.

"She's working okay, this robot?"

Billy nodded.

"Was there when I came home. Mr. Karmody from the corporation was there too, with dad and an engineer. Dad signed up all the papers. Huh. Funny you said 'she': this kind like a name, so mom called her Anna. Doesn't that seem funny? Anna got my tea."

"Was it a good tea?"

"Sure," said Billy tonelessly, "Everything I liked. And the thing's almost a hundred per cent silent: when it moves all you can hear is its feet. Speaks nicely too."

Gramp was watching Billy narrowly.

"Suppose you realise that it's going to cost your father a packet for a whole number of years?"

Gravely, Billy nodded again.

"Your Mom had to have one, sick as she's been. And they don't dish out M.A. jobs to anybody, even though the customer could pay cash."

"That's right." Oh, how unlike the bouncing, bubbling Billy he used to be: how dull his eye and flat his voice! Gramp saw it had to come, that flood of tears which the boy was holding back, so he went on talking quietly until his grandson got it out of his system.

"It's right that they should keep tabs on all robots, but especially on the M.A.'s. They're clever, and there's harm from them if the wrong sort of people get them—even models like those of today. Can't imagine what it would have been like in the real early days—'bout a thousand years ago: robots they built then were practically imitation men, so they say."

He moved a step nearer the boy: Billy had his arms on the bench, and was looking out at the tangled garden.

"That Mr.—what you say his name was? —Karmody: think I met him: big cheerful feller? Always making cracks, huh?"

That did it: something had to, and that remark served. Billy's underlip trembled.

"Yeh. That's —him. H— he said that—if I wanted help with my homework—Anna wouldn't be any good to me." The boy's whole body was beginning to shake: Gramp put an arm round his shoulder, said no word to the child he loved. Let it come: it had to come.

"Laughed and said—said—Anna could only do the four simple rules in maths."

And then the tears flooded out, and Billy sobbed with all the intensity of frustrated, angry, beaten childhood, while Ed Santor put his arms round the boy and held him and let him have it out, held him while the convulsions of the wiry little body turned to shorter sobs, and the sobs to sniffles. Then he produced a handkerchief and still saying no word, wiped the streaked face and the reddened eyes. Then he put the handkerchief away.

"Well now," he said, "what was it you came to say?"

"Gramp: just about every boy has his own personal robot these days, doesn't he?"

Gramp cocked his head like a wary bird: now it fell into place. But he just listened, making a grunt.

"D'you know, I'm the only one in our class who doesn't have one?"

"Makes you kind of exclusive, huh?"

Billy did not answer.

"Didn't you say that friend of yours, Jimmy Vacek, wasn't it?—didn't have a robot either? Why, you used to make a joke of it—said you'd robot for each other."

The corners of Billy's mouth were down as he rubbed a sandalled toe on the dusty floor of the workshop.

"That joke died today: Jimmy came to school this morning with his new robot."

Billy steeled himself against a recurrence of tears.

"Thing that hit me though, was that Jimmy was such a good pal about it. He offered to see his dad about having his robot programmed so that it would do things for me too. Said it was okay with him if it did the maintenance on my writer, or gave me a rub down after athletics—"

And Gramp still listened.

"You see," he said very quietly, "I don't belong somehow."

Gramp put a hand on his shoulder.

"Your mom needed that robot at home, Billy. First things first. She had some pain son, and you may not know it, but there were times when you got a mite impatient, because you couldn't have her out with you like other boys."

"Gramp, I didn't want to act mean, honestly!" He moved away, still tense, as though with another important thing still unsaid.

"I feel a rat, sort of coming behind dad's back and asking—I mean, I know he can't afford—"

"Nothing you've asked for yet, as far as I can see," said Gramp slyly.

Billy was embarrassed.

"You guessed."

"I guessed. I'm a mind reader, where you're concerned. You didn't worrit your pa overmuch?"

"I—tried not to."

"Humph." Gramp got up and walked slowly round, then came to a stop in front of the boy. "So what now?"

"I wondered if you could—that is, if you've got—"

"Maybe. There's a lot of materials here. Could run you up one I guess, except that there's the brain question : that's what costs the money in a robot. Other thing is that the robot's got to be programmed dead right for the work it's doing. That's the law." He frowned in thought. "Shall have to see if there's anything I could adapt. I'll have to look through what there is : whole lot of stuff in the next shed."

He walked to the door and took the boy with him.

"Now suppose you go home and be nice to your mom : give her my love, and to your pop. You come round to see me tomorrow night."

He stroked the boy's head, gripped his shoulder.

"Okay," said Billy. Then he gave the old man a sudden hug before he left. Ed Santor watched him go down the narrow road, and smiled fondly.

Gramp knew that Billy could not see anything unusual in his demands not when personal robots for boys were so common. He agreed with

his grandson too : after all, the boy had had one or two rough passages in his life, with his mother being so ill. But finding something that would do might not be so easy : the whole robot business today was super specialised and even though he, as an ex-employee of the corporation might be treated tolerantly with his rebuilding and cannibalising, he still had to obey the law. Apart from the masses of equipment used in all walks of life which might loosely be labelled 'robot,' those machines specially singled out for a lot of legislation were the bipeds which to a greater or lesser extent imitated man in his manifold activities. There were all grades, from the lightly programmed labourer robots to the more detailed types like the personal robots of the valet class (such as boys at school might have) up to the restricted multiple aptitude creations, of which there were many grades. It was one of this last type which George Santor had at last obtained for his wife, a tireless slave which was capable of so many things—except human feelings.

Billy came into the shed that night with his hang-dog look no longer on him. When he saw what his grandfather had there his eyes popped and he jigged excitedly.

"You got one, you got one !"

"Hallo," said Gramp. "Reckon this one might do : it's got a brain in it all right, but I'll have to make another power unit to slot in. Never saw the like of some of the things there are in this one."

Billy stared at the machine ; it was a little taller than the average modern robot, and certainly much thicker in build. It had a single scanner of about a hundred and forty-five degrees, it was three-fingered instead of five or more, and its smooth head was curiously large. Gramp had its chest cover off and was prodding about.

"Where did you get that ?" asked Billy. He stood rigid, like a small question mark, taking in the looks of the thing which with any luck would soon be his. He couldn't help noticing though that it didn't look like other boys' robots : still . . .

"Get it ? Danged if I can remember," said Gramp. "Bought a whole lot of stuff some time ago, and I've never yet worked through it properly. I figure she's complete, this one."

"You mean she'll go soon ?"

"Think so. One thing I do know : she's not been activated for a whale of a time." Bending, he waved a hand back of him.

"Hand me those two leads son."

Billy saw what he wanted and managed to take his eyes off the robot in order to pass the two leads from the generator. His robot, *his*, HIS ! Gramp took the leads: Billy walked round and eyed the machine from another angle.

"'Nother queer thing about this one," went on Gramp in ruminative fashion, "Is that, far as I can make out, it's got no mark or serial number."

"Uh, huh," said Billy : the significance of the remark passed him by. All he knew was that any minute now the robot, *his* robot would be activated.

A faint hum came from the machine : Gramp looked up.

"Hear that?" He cocked his head like a bird. "My, she *is* old."

The robot spoke : the voice was flat and stiff sounding by modern standards, but quite clear.

"Always," it said, "I am he : my name is Jones."

Billy started back, but regained confidence when he saw that Gramp had not moved. The old man questioned the robot.

"What maker?"

"I am not aware."

"What principles of service?"

"Asimov's."

"Repeat them."

The robot did so.

"Grade and number of circuits?"

"I think—" the robot hesitated in an almost human manner, "—I do not know."

"Brain type?"

"Anadium positronic."

"What is your freewill index?"

"I have not heard of it."

Gramp wanted to know to what degree could this robot make its own decisions without reference to human authority. It was strange that it could not answer the question.

"Maker and serial number?"

"I do not know."

Gramp seemed a little put out : it should have been able to say more for itself than this.

"Listen robot—"

"Jones, please."

"Jones then. Just how old are you?"

"I cannot answer you."

"Are you an old high-class general aptitudes job, or are you a specialist?"

"I do not understand the question. I am a robot named Jones, ready to serve you—or the boy."

Billy could contain himself no longer.

"Oh, gee!" he cried: "That's wonderful, wonderful! Oh, she'll do for me, if she can say all that—"

"*He* please Billy," said the robot.

"Okay Jones, will you be my robot, and come with me to school?"

"Certainly, Billy. I am always willing to learn."

Gramp looked surprised. The thing nearly made jokes.

"Fine," exclaimed Billy. "And you can look after me just the way the other fellow's robots do: you could learn Jones, like you said! Oh, wait till they see me with—"

"Hold it," said Gramp. "Not so fast, Billy. You can't have this one straight away. I've got to run a few tests, and make sure that it can do what you want it to do, and not much else. Remember that I'm probably busting half a dozen laws by doing this thing up, for a start. I'm not having any inspector breathing down my neck and telling me my job."

Jones stood humming to himself very softly: whatever aptitudes he had or had not, he knew when to keep quiet. As Billy looked from the robot to the kindly old man whom he loved so well, he felt as though he wanted to cry again, but this time, from sheer happiness.

It had been very difficult for Billy to restrain himself from telling his pal Jimmy Vacek about the robot he was going to have, and the difficulty was increased because Jimmy desperately wanted Billy to share his own robot. Billy had promised Gramp that he wouldn't say anything though, and he kept his word. He gulped his tea, tore through his homework, and was round at Gramp's as fast as the car service and his legs would carry him. When he arrived at Ed Santor's place Gramp was sitting on a box looking at Jones, and Jones was standing looking at nothing.

"Is he switched on?"

Gramp nodded.

"How's he going?"

"He's okay." Gramp sounded reserved.

"Then—?"

"There's a lot we don't know about him, Billy: there's a lot he doesn't know about himself—or says he doesn't."

"Yeah?" Billy scarcely heeded the old man's cautious words. His dream was going to come true, surely it was. And it was a better dream than any other boys in his class possessed, for whereas they, with the possible exception of Jimmy Vacek, took their robots for granted, he felt that he had been waiting so long that he would never be quite as indifferent as the others, to what was, after all, a wonderful possession.

"Hallo, Jones," said Billy.

"Good evening, Billy," said Jones.

Gramp was watching narrowly.

"Going to be my robot, eh?"

"I am very happy to be activated again."

"There," said Gramp. "See what I mean? Got a very full vocab, and uses it. It's the way he uses it: sort of accomplished and—indirect. Smart enough when he wants to know anything, cagey when it comes to my turn to asking the questions. Wish I'd run a tape on some of its talk. One time I got into an argument with Jones just like he was a human being." Gramp shook his head: "*Some vocab.*"

"I wish to be of service to Billy," announced Jones suddenly. Billy looked at his grandfather and asked, "Well, that's okay isn't it?"

"H'mph," said Gramp. "Went over the history as well as I could: he's had a lot of parts changed." He looked seriously at Billy: "You've not told your pop yet?"

"Nooooo," answered Billy, "'course not. I remembered what you said: but I figured that if I was to take Jones home tonight you could ring dad and tell him that—"

"Now wait. You're still going too fast. As far as I know, Jones would make a good boy's robot, but you know as well as I do that we can't let a robot go out and do a job without being pretty sure of its abilities. That's the chief snag with doing the kind of jobs I do. Jones had better stay here with me for a few days, though perhaps he could go to school with you. We must figure out some way in which you can pick him up from me in the mornings, take him to school, and drop him back in the evenings."

Billy frowned.

"That would be awkward: I'd have to leave home a lot earlier in order to come here first, and then go on to school with Jones. The folks would want to know why."

Gramp considered this: so did Jones, apparently, and made a suggestion.

"Couldn't I walk from here to where Billy gets off the car for school, and then go along with him?"

Gramp seemed about to reprimand Jones, and then thought better of it. He grunted.

"That might be an idea after all. Sooner he does go with you the better, from one way of thinking, because then we'll get to know if he can do the job for you. And there's a lot of finding out I've got to do on Jones."

"I will meet you tomorrow morning then, Billy—"

"Just a minute," put in Gramp. "There's a policeman at that intersection: suppose he sees an unaccompanied robot of no particular class walking along: what's he do? Want three guesses?"

"Then let me be disguised," said Jones readily. "If it were to appear that I was a class of house robot going to make some purchases, he would not be suspicious."

"Swell idea!" said Billy.

"Unless," said Gramp doubtfully, "he knows all the house robots in the district by sight." He thought about it for a moment, and then exclaimed "Oh, what can they do to me?" Then he looked doubtful again. But he caught the look of appeal on Billy's face, and he could resist no longer. He knew that a robot was a necessity for Billy, now. He had to be like other boys, he had to belong. He shrugged off his doubts and acquiesced.

"Okay: guess that'll do."

Billy beamed.

"See you tomorrow then, Jones—eight forty-five at the intersection."

"I shall be there," replied Jones. Billy gave his grandfather a hug, and they turned away to the door. Neither saw Jones raise his hand in a gesture of patting Billy's head.

When Billy got off the car the next morning Jones was waiting on the broad sidewalk. When he saw Billy he came up and dropped into step with him.

"Good morning, Billy."

Said Billy, "Now that's the first thing you should know. If you're a boy's robot you only speak when spoken to; didn't Gramp tell you that? Don't you want to be my robot?"

The reply, necessarily unemphatic, yet seemed to carry an emphasis.

"Certainly, Billy."

"Right then, remember that Gramp's still not happy about you, Jones. Just you notice what other robots are like, and you be the same. Here, make a start." ..

And Billy put his satchel into Jones' hand.

"Hey!" A boy's voice sounded from behind, excitedly shrilling down the sunlit avenue. "Hey, Billy."

Billy stopped, swelling with pride: it was Jimmy Vacek, and behind him came his robot. The youngster came charging up, surprise all over his sharp little face. He skidded to a halt and stared at Billy's robot.

"Yours?"

"That's right: name of Jones."

Jones said nothing : he was learning.

"We-ell ! Say, isn't he a bit bigger ? What's his index ?"

"Usual, I guess : my Gramp did him up for me."

Jimmy walked round Jones : his own robot was immobile.

"All right," said Jimmy at length. "You're lucky to have a gramp who can do that : he's not standard though."

"Would you worry ?" asked Billy : "Come on, let's go."

They walked together to the school entrance, and had just begun to travel the broad driveway when Jimmy stopped. He looked angry.

"Look out," he whispered, "here's Gimbell."

Billy stopped too, and with rising distaste watched the rapidly approaching figure of Horace Gimbell, a young gentleman whom he always sought to avoid. Gimbell, the son of a police sergeant, was a large scowling youth, expert at baiting smaller kids. He had spotted Billy and Jones some way off, and the opportunity had seemed too good to be missed.

"Sa-ay ! Still there a minute young Santor !" He came running up, leering at the two, and then aimed a sudden push at Jones. If he had not been so concerned with what he was about to do next to the two of them, he might have noticed that whereas such a push might well have toppled the usual school pattern machine, Jones merely stepped aside and stood still again.

"What *is* this thing you got here ?"

"What's it seem like ?" Billy returned, with spirit. "It's a sight better looking than you are !"

"Hah !" Gimbell thrust his face close to Billy's. "Saucy this morning, eh ? Suppose I knock some politeness into you ?"

He handed off Jimmy who was making a skirmishing movement to the rear of him, and Jimmy sat down with a bump. Then Horace Gimbell made the mistake of his life : he raised his hand to Billy. The next moment could metal fingers took him by the scruff of the neck and the seat of the pants, and he found himself lifted and taken in the direction of the nearest ornamental pond. Jones swung the frightened lout to and fro, and then, with a nicely timed pitch for a patch of water lily, he let go. With a hoot of fright Gimbell sailed through the air, hit the water with a great heaving splash, and disappeared, to come up again a moment later dripping and gasping, festooned with weed. The two youngsters, unable to decide if they should laugh at the spectacle or be amazed at what Jones had done, had their indecision cut short by a distant ringing.

"First bell," exclaimed Jimmy. "Come on."

As they ran, the robots following, he panted out "W-what class did you say Jones was ?"

Billy decided he needed all his breath for running.

After assembly and prayers they started off with a double period of elementary physics, and neither had any time to think about Jones, standing in the robot shelter in the playground. The teacher, a pompous Eurasian named Minat, was a man whom they did not particularly like, and they were glad when the lesson was over. With many boys passing them in the broad corridor, Billy stopped to look at the books under his arm and exclaimed, "My maths books! Guess they must still be with Jones."

"Hop out and get them then," said Jimmy. "Say, what did you make of that last homework problem?"

Billy's heart went into his boots.

"Gee! I forgot to do them!"

"Wow!" said Jimmy: "You wait until Mr. Lim hears you say that!"

Billy flew into the playground, rushed to the robot shelter. They were all standing there rigid, all except Jones. He was sitting down with a ballpen in his hand and an exercise book on his knees. He jumped up into immobility when he heard the footsteps, but sat down again when he saw who it was.

"My maths books—"

"You forgot to do the homework," said the robot. "I saw that you had put the heading up, and the exercise number, so I thought that I would do them for you." He held out the book, and there were the problems, all done in a script which at a pinch might pass for Billy's own. The boy gaped.

Jones said "I hope that these are the accepted methods today: it is a long time since I did any."

"B-but you're not supposed to *do* this sort of thing—"

The robot shut the exercise book with a snap, clapped the text book on top of it, and handed them to him. Of course, there could be no feeling in a robot's voice, and no expression on where there was not a face, but . . .

"You will be saved some trouble I hope: my only wish is to serve you Billy."

Hope: that vocab again—so fluent: no wonder Gramp had been disturbed. Just a saying of course, for how could a robot hope? Jimmy's mind caught at the problem again, found no toe hold, and slipped off once more. He grabbed the books.

"Don't do it again: and where's your Off button, so that I'll know you'll be still?"

"I'll be still: but I have no Off button."

"No? Well, stay there and behave yourself."

Jones put a hand on the boy's shoulder.

"For you, of course I will."

Billy tore back to his class.

For a week past Jones had been coming to school with Billy, meeting him each morning, leaving him each afternoon, and still Gramp insisted that Billy should not tell his father: the boy protested at the apparent unreason of the old man: Ed Santor spoke evasively of finding out all about Jones, of nightly investigations, and would then become taciturn and make maddeningly elaborate attempts to change the subject. Billy tried to keep his mind firmly shut to the nagging conviction that Jones was rather obviously not the same as the robots the other boys had, if only from the point of view of appearance, and gamely protested that if Jones was a suitable machine for him to have for a week, what was all the secrecy about?

Jimmy, of course, was in on the affair now: if Billy had had no one with whom to share the secret, he could neither have eaten nor slept.

One night, when it was raining, they were in Billy's room, playing old-fashioned chess—the kind that has only one plane of movement.

"S'matter with you?" asked Jimmy, when he won another game: "You're not concentrating."

"No, I'm not. It's Jones."

Jimmy was sympathetic.

"If your grandfather doesn't let you take him home soon, someone's going to tell your dad that you've got a robot."

"He's been acting okay lately," said Billy, "But—oh, gee, you know what I think I'd better do? I'll ask Gramp if he can get a new outside casing for Jones that'll make him look like ordinary robots. See, I *know* he's different."

"So does Gimbell," giggled Jimmy.

A smile crossed Billy's face for a moment, and then it faded.

"Yes, he stayed quiet about that. But it's Jones himself—" he stopped. "See what I mean?" he went on quietly. "I said 'himself.' That's the way you get to talking about Jones. Even when he's quiet I know that he only shuts up because I tell him to: can almost hear him thinking." Billy looked very worried. "I don't know what to think. Instead of seeing what he could do, we've sat on him and told him that he mustn't do this that and the other. Had to. I wanted a school robot, so a school robot Jones was, far as anyone outside is concerned. But he knows."

"Knows what?"

"Knows—I don't like him looking different, being different. Sometimes I feel him being—almost fond of me. It's weird. And remember that time when the helicab got off the beam and came down onto the pavement? He shoved me out of the way just in time—what school robot could have done that?"

Billy's hand scrubbed at his hair in worried fashion.

"Sometimes I get the idea that he knows what *I'm* thinking."

Jimmy said, "Then if that's how bad you feel, you'd best go over and see your Gramp." He got up and crossed to the window, looked out into the spangled evening. "It's stopped raining now."

"Fine." Billy rose, put away the board and the chessmen. "We can go right over : it's not too late."

Jimmy, who was still looking out of the window, suddenly stiffened.

"There's a road car just drew up outside. It's a city police patrol."

Billy joined him at the window.

"So 'tis. Who's that getting out?"

"A sergeant."

Then they both knew who it was.

"It's Gimbell's father ! What's *he* want?"

"About Jones and the pond maybe?"

"What *now* ? Oh, no !"

They heard the bell ring, and softly they heard Anna go to the door. They heard Gimbell announce his name, heard him invited in, heard the door shut, then the living room door too.

"Come on !" whispered Billy : "We've got to know !"

They crept down the stairs and crouched at the living room door : voices were just distinguishable.

"—thought I'd better see you straight away, Mr. Santor."

"H'm." Billy's father's voice sounded serious. "You've not declared any emergency state yet?"

"No—just a standby."

Billy breathed to Jimmy, "It ain't about the pond then !"

But he continued to listen.

"Every patrolman's on the alert, of course. Headquarters have already checked that every machine in stock or at complete assembly is accounted for : and we don't want to put a check on private machines, like that one you have for instance—because we'd sooner avoid the publicity. But there are a few leaks in the robot business—"

"What are they going on about?" Jimmy looked baffled.

"Ssh ! !"

Billy's father said "Jointing sockets like that cost a lot." There was a pause, and the boys listened, scarcely breathing, hoping to understand soon.

"The patrolman is absolutely sure about it?"

"Dead sure, Mr. Santor. Says that he fired when the figute didn't stop at his challenge, and the bullet bounced off metal. He saw the shine on its body too."

Billy's eyes were wide : he thought he understood now. He heard his father's voice again.

"So. There's an unknown robot loose somewhere : one that can climb walls, force an entry, steal selectively. What's your HQ's time limit on this business?"

"Dawn, sir."

Billy bundled Jimmy away.

"Gosh ! You know what it is?"

"Think so," answered Billy. "Only one unclassified robot that I heard of : come on : let's get over to Gramp's?"

"But how do you know he's loose?" demanded Jimmy, but his friend pushed him outside and they were up the path and into the avenue as Jimmy decided that he might as well save his questions. They caught a car, transferred to another, and on being dropped at the city limits ran puffing to Gramp's house. Billy holloood, and received a reply from the workshop. They slowed down from their anxious rush, and walked into the brightly lit doorway. Gramp met them just inside, a wary expression on his face.

"Hallo Billy, And Jimmy too. Never expected to see you as late as this?"

"Has Jones been loose?"

Gramp stepped back from the question.

"How do you mean, loose?"

"Going around on his own?"

"Well, he meets you in the—"

"No, no ! I mean just now : tonight. Or any time over the week-end?"

Before Gramp could give any sort of reply there was the sound of a powerful roadcar drawing up outside the house. The old man was attentive.

"Now who would that be?"

Billy's words rushed out.

"Likely it's pop and police sergeant Gimbell : he called at our house not long ago 'cause there was a robbery and a robot loose !"

"Then he'll have called here because he knows I do up robots !" rapped Gramp. "Hey:" he opened the door to what looked like a very large cupboard. "Get in there and don't make a sound !"

He pushed them inside with emphatic haste, and he closed the door just as footsteps were heard outside.

Billy and Jimmy were once more crouched against a door, listening. "Evening, son," they heard Gramp say.

"Hallo, dad." That was George Santor's voice. "Still working?"

"Man's got to do something. Who's this?"

"Sergeant Gimbell, dad. We're investigating a robbery, probably done by a robot. We believe that—"

They heard George Santor repeat the story, with Gimbell's help. Gramp listened mostly in silence.

"—So, I knew that you were one of the few men in the city who might provide—I mean allow—"

"D'you figure, son, that I rigged up an M.A. robot and sent it out to steal?"

There was no reply to that : just a long, charged silence, broken only by the scrape of feet on the floor and a cough.

"Sergeant," came Gramp's voice, "as it's your duty to investigate, you'd better come and see what I'm building at the moment—and you too, George. Didn't want anybody to see it until it was finished, but I guess you'd better. This was something I was doing for Billy."

"H'm?"

Gramp's voice went on : "I knew that you couldn't afford to buy him a robot of his own, what with having to get that one for Mary, so I thought I'd make him one up. Standard pattern of course. On the bench in here—"

It was hot in the cupboard place, and Billy's bafflement made it seem hotter. The voices died away as the men outside moved into another section of the workshop. Billy gave a gasp of exasperation.

"What the *heck* does Gramp mean?"

"Said he was building something for you."

"But I've got Jones," returned Billy. "I don't see it. Says he's building one for me when I've got Jones : all he has to do is to tell Pop about him. That won't be Jones on the bench in there : it can't be. Anybody can see at once that Jones isn't a modern robot."

"Standard pattern, he said," whispered Billy.

It sounded as though the men were returning.

"So when I get the brain in, run a few tests, Billy can have her."

"That's grand, dad," answered George Santor. "Listen, if the brain's going to cost you too much I could help a little with the money."

"I'll fix it," answered Gramp.

"Certain that the robot didn't come from here Mr. Santor," Gimbell was heard to say. "Of course, there's always the chance that the patrolman could be mistaken, and that it wasn't a robot did it. But you know how touchy we all get at the mere thought of a loose robot."

"Right enough : come on then, sergeant : there are just one or two places you might call at—"

The boys heard the exchange of 'goodnights' and the sound of footsteps died away. Then Gramp fumbled at the latch, and they stumbled out into the light again. Billy was full of furious questions.

"What's the idea of that story? Why'd you tell him that you were making one? Why *are* you making one? Have you taken Jones apart?"

Gramp's expression was solemn: he clapped his hands on Billy's shoulders, regarded him steadily. He seemed disturbed.

"No, boy. I've not taken Jones apart. And there is another robot—being built. Perhaps what I said just now—perhaps what I've done is no example of good honest behaviour: but what I've done I've done because I felt I had to."

The old man's voice was serious, and the quaver of emotion with which he spoke caught and tugged at the affection which Billy felt for him. And Jimmy was silent and serious too.

Gramp patted the boy on the shoulder and indicated the far door.

"Come in here, and see."

He led the way into the other room, that same place into which he had led the police sergeant and Billy's father. On the bench under the broad shaded lights lay a shining figure, a new version of the robot which boys were allowed to have at school. Tools, drills, equipment lay around, but the thing which riveted the attention of the boys was that bending over the prostrate machine, beginning to fit up the complicated knee joints, was Jones. The robot turned: he straightened and said "Good evening, Billy."

Silence. Billy looked from his grandfather to the robot. A late moth dinged into the light, clangorous in the quiet. Ed Santor's eyes were moist as he looked on the boy he loved so much. Billy's gaze swung from the contemplation of the robot on the bench and the robot standing beside it to his grandfather and back again; the knowledge that his grandfather had told a lie bewildered him. When he found his voice, it was a small, dry, hesitant sound.

"You said—you were making it."

"Right. I'm—doing something towards it. And it is for you."

"What about Jones?" Oh it was silly, this feeling that one had to consider Jones! Jones was a *robot*! Yet Billy looked anxiously at the creature of metal as though wanting it to say some word of comfort.

Gramp sat down and drew Billy to him, while Jimmy watched in respectful silence and Jones gazed from that impassive scanner.

"These nights," said Gramp softly, "I've been talking to Jones learning a lot."

No word from Billy: Gramp made another attempt.

"Didn't you feel that Jones was special, somehow? Not even like a top grade M.A. job of today?"

"Sure," said Billy, "I felt it." He thought of the affair of the pond, and the maths problems, and the helicab. Jones was special all right : but there was more to it than that.

Gramp went on : "Jones suddenly became very truthful to me. He told me just about everything he could, because he had to."

"He had to?"

Gramp nodded slowly.

"You'll see why soon. But first, he told me how old he was : that's the key to it."

Billy said in a whisper "How old? Two hundred years—three, four?"

Gramp shook his head.

"No, Billy. Jones is nothing like the robot we know today. Jones is very early indeed : he's really more of an *imitation man*!"

He saw the expression on the faces of the boys, and he gave it up.

"You tell 'em, Jones."

Jones took up the tale.

"I am nearly a thousand years old, Billy. I am one of the very first fully automated 'freewill' robots. You could not find my plate on me because I had deliberately removed it, when I was last activated nearly five hundred years ago. Even then, you see, things were changing, man's ideas about robots were advancing, and I did not want to be obliterated."

There was a pause : the broad lamps gave down their brightness upon the dull body of the old robot, the shining corpse of the new, the two wonderstruck boys, and upon the bent old man who had heard it all before.

Jones said "I wanted to stay *myself*."

For robots today, the conception of self did not exist : Billy found the nearness of his grandfather very comforting.

"When I was activated again, I knew that I would have to be careful. That, I soon learned : the laws were tighter than ever, and robots like myself were no more than a myth to most people, though specialists knew about us through drawings, and the museums. So from the moment when I came alive again, I was trying to learn, to find out as much as I could about this present world of yours which, if I was lucky, might give me my last chance."

The three humans were gripped by the eerie quality of the situation : it was bizarre, that they should stand listening to this voice of long ago, a voice which seemed in sum to have an emotional quality which was yet possessed by no separate word it uttered.

"I knew that if I escaped disassemblment, there was still the greatest likelihood that I should not survive very long. Though I am to a large degree self maintaining, there are necessary things which I cannot do for myself, and there is no one in the world today with the knowledge to do them for me. Not even your grandfather. And I had a great desire to survive."

"A desire to survive!" Billy's exclamation burst out. "But you're a robot, made by man!"

"Hear him out," muttered Gramp.

"Can man make anything, good or evil, which in some way or another is not in his own image? Are not the ancient horror of the cobalt bomb and the present wonder of the Solar Federation both manifestations of man? And I was one of the first of my kind: how could I help being like a man, when I possess a brain which learned even as man's brain learns? I have served man and observed man for all these years: what else can I be but like a man? Not a complete man, of course, but enough like one to note some of the good things which man has, and to want them for myself. One thing I have wanted for long enough: it did not seem possible at first, even when I was re-activated and told to serve you. I came to know and to understand you, Billy. And still my need was great: it still did not seem possible that I could have what I wanted, before this weak old machinery gave out. Then I talked to your grandfather, and I saw how the two things, my regard for you and my other need, ran together."

"What other need?"

"Just as your father has you," went on the even tones, "So I wanted to hand on to . . . to a son."

Silence. Gramp scraped a foot, spoke huskily.

"Makes it sound right, don't he?"

"Yeah but—" Billy was still wrestling. It was too much to take.

"But a robot doesn't *go* like that."

Gramp said "Not the kind of robots we've ever known. But Jones is an *original*: man put all his personality, all his good self, into these early ones."

"My fondness for you began to increase, Billy," the robot continued. "And I began to think that if you had a new robot to serve you, like those the other boys had, that would suit you best. Because I am an old fashioned robot, I understood your need to conform, and I knew that sometimes you looked at me with disfavour, because I was not like the servants of your schoolmates. Then one night I took a chance and confided in your grandfather: I found he understood, and so I

told him everything. We set about making a new robot, one for you that would also carry on for me. For I am nearly worn out."

Gramp spoke softly. "He made the robot : reads a drawing fine. Been doing it while I sleep too."

Billy said slowly "That robbery that Pop came about?"

"He did that. It was for the knee joints that we didn't have. I'll put that right later, somehow."

Billy looked worried.

"Regrettable, but necessary," said Jones. "I do not think that I shall last much longer. Time is against us all."

He bent over the body of the new robot : the wonder of it all was lost on him, perhaps, but it was cast upon the three humans like an awesome cloak.

Billy moved to Jones.

"When will the new one be ready?"

"Very soon. And when it is, your grandfather has promised to bring it to life, as I die. This of my making will carry on for me : this, my creation, will have my brain."

Billy tried hard not to show that he wanted to cry.

John Kippax

Editorial-In-Brief

Time and space did not allow for a full-length editorial this issue, my return from the New York World Convention being so close to the press date for this issue that most of the magazine was printed while I was still away. Meanwhile, my apologies for not being able to include Dan Morgan's lead story "The Whole Armour" this month as scheduled. During my absence the manuscript went astray—but has now gone to press in the December issue.

By the way, *Science Fantasy* No. 20, which has again been delayed through lack of suitable material, will be published early in November. There's an outstanding novelette in it by John Brunner, titled "A Time To Rend." Make a point of ordering the issue today.

John Carnell

TREE

Even the accidental arrival on Earth of an alien entity could be a difficult situation for human beings to face. Especially if the alien were small—and different—and decided that Earth would be a suitable planet upon which to live if it were suitably altered.

DWELLER

By George Longdon

As automatic mechanisms detected the presence of a gravitational field, the tiny vessel began to lose its extreme velocity. From thousandfold multiples of the speed of light, its rapid motion fell quickly, and it touched atmosphere at fifty-thousand miles per second, a blue radiance playing before it, braking its descent to the planet below.

Self-acting equipment flicked into life, sending an instantaneous stream of code signals back to base in the remote Ursa Minor group. The planet which the vessel should have reached was uncountable light-years more distant. But in travelling from Ursa Minor an infinitesimal error in mechanical design had combined with a minute mistake in calculation, bringing the vessel near a planet it should have passed at five million miles. Auto-mechanisms responsible for landing had been actuated, turning the vessel to Earth. It was an error, but a safe termination to the journey seemed likely Information conveyed, the sub-radio clicked into silence.

Woodland arose below. Hurtling like a cannon ball, still braking, the vessel struck the topmost cleft of a huge elm, split wood to right and left, and sank into the core of the tree, sap hissing at contact with the white-hot metal. Cooling was slow, the vessel, scarcely a foot in diameter and two long, burning its way into the tree's heart. Smoke rose, drifting on the wind, and the split limbs of the tree closed over the opening.

Soon even the smoke had gone and the tree stood silent. In the vessel its single occupant slept on, not conditioned to awake until such time as the ship should have reached its far-distant objective. Nowhere in the non-physical entity of the alien's brain was any awareness that motion had ceased. The planet-fall should have been much more controlled, occupying hours; but Jalit slept on while Spring came and the growing elm closed its vigorous bark around the wound. Only at infrequent intervals did the sub-radio click into action, signalling across the galaxies to remote Ursa Minor, where Jalit's companions waited patiently for Jalit to awake and report.

Jim Donnels waved the timber-wagon driver to a halt. The thud of the diesel motor ceased, and the wagon came to rest under the timber-yard gantry. Jim walked behind the wagon, eyeing the great elm trunk speculatively. Sixteen, he hoped one day to be much more than odd-job man at the yard. Hammerfield & Sperry was growing, prospering, and he felt that with luck his fortunes might rise with it. Sperry was business-like, quick, but gave promotion, responsibility and wage increases where deserved. Jim's freckled snub nose wrinkled with a grin. He liked Mr. Sperry.

The tree was big, even with side branches gone. Jim's quick gaze sought for nails or embedded fencing wire dangerous for the band-saw. But apparently no farmer had ever nailed rails to the giant, or used it as a post for barbed-wire fencing. Only very high was a healed wound, as if wind had broken the top.

A man came from the mill, thumbs stuck in breeches belt. Big, broad, his roar echoed among the piles of sawn, stacked timber.

"Loitering again, young Donnels!" he accused.

Jim jumped involuntarily. Slight and sandy, a boy though tough, he could never be a match for Colin McMurdo, thrice his age and nearly twice his weight. McMurdo halted, bare arms like a pugilist's folded over his chest, muscles knotted under hairy skin.

"I'll have a word with Mr. Sperry about you, young shaver!" he stated nastily. "Been wasting time again on what don't concern you?"

Jim flushed. "I was checking for nails! There's an old split near the top." He hoped McMurdo wouldn't tell lies to Mr. Sperry. A foreman's word carried weight, and McMurdo knew it. The roaring voice could shout down any man at the yard, and often did. Undeniably curious, wanting to learn, Jim had suffered his share of abuse. McMurdo, more muscle than brain, loved to belittle him.

The foreman walked heavily round the carriage and stared at the scar. His lower lip jutted out, and his heavy round face was momentarily set in ponderous concentration.

"Struck by lightning years ago!" he stated at last.

The tree was lowered to earth, sawn into four twelve-foot sections, and the largest hoisted by gantry and deposited on the carriage of the band-saw. The carriage began to move forward, the saw to run, ripping its first cut along the length of timber. Noon had come when the first sections were finished, and piles of boards had been drawn away, numbered and stacked. Sweating, Jim examined the scar on the final section. If the damage had gone deep it would spoil a lot of planks, he thought.

The band-saw was screaming steel two inches wide, seventy feet long, and running round two wheels eight feet in diameter. It showered a cataract of sawdust as the first few cuts were taken along the edge of the last piece of the great elm.

Jim mopped his brow, resting momentarily. It had been a hard morning. No wind cooled the yard, and the high sun shone with scorching summer heat, shimmering on the surrounding countryside and on the long stretch of woodland a mile away, hiding the nearest town, and Hammerfield & Sperry head offices.

The shriek of steel teeth on something infinitely hard jerked his mind back to the creeping carriage. His ears rang from the violence of sound. The howl of friction became a vibrant scream, shuddered, then a sharp explosion echoed through the yard. The broken saw, no longer a continuous loop running between the wheels, snaked past him, one end slithering into the saw pit. Its teeth were blunted, turned back by contact with something harder than steel. Someone switched off the motor. No one spoke as Colin McMurdo vividly declared everyone but himself was a fool.

"Damn me, but Mr. Sperry will hear of this!" He swore and his eyes, fierce with anger, settled on Jim. "You said there was no sign of metal—"

Stung, Jim faced him, "There wasn't! I showed you the scar—!"

Fingers closed painfully on his shoulder. "Who's supposed to look over trees when they come in? Not me! Think I've nothing

better to do?" McMurdo snorted. "Mr. Sperry will have something to say about this!"

Jim felt fury and helplessness. "It wasn't my fault!"

As reply McMurdo pushed him. He caught a heel, fell, and landed flat and bruised on the band-saw carriage rails. McMurdo scarcely looked.

"Get axes and chop out what the kid missed!"

A gang began working on the trunk, and Jim wondered what manner of object could be present in a position once so high above ground level, and hard enough to break the tempered saw. As chips flew a gleaming metallic surface, curved and smooth, came into view. Astonished, they worked on, exposing it. The saw had made no scratch in tearing itself to destruction. Finally stood revealed a metallic ovoid about two feet long and one foot in diameter, without aperture or markings, but with four equi-distant fins, joined by a metal cross-member, at one end.

McMurdo pushed back his greasy engineer's cap when he saw it. "Some kid's toy spaceship, I warrant!" he said.

He tried to jerk it away, but failed. Standing on the log, feet spread wide, he also struggled without success, and Jim saw muscles bulge on his neck and ripple under his blue shirt. After a second attempt he straightened.

"Hook the gantry on it!"

Dangling, the object was lifted from its resting place and deposited on the ground. They all examined it from every angle, then rolled it laboriously to the side of the sawmill building, where the gantry terminated. McMurdo stared at it, hands on his belt-face showing frustration and annoyance, opened his mouth to speak, then snapped it shut with an audible click. A blast from the dinner whistle saved him the need for comment.

Jim lingered, fascinated by the smoothness and finish of the discovery. Perhaps a type of bomb which some craft had dropped, he thought, then dismissed the idea. The tree showed extreme heat had been present. The others had been gone fully twenty minutes when he left.

A big saloon stood at the timberyard gate when Jim returned, and he wondered if McMurdo had phoned Sperry, or whether the active partner of Hammerfield & Sperry had arrived on other business. Most of the men lodged or lived within a half mile radius, and were already back. Sperry was thirty-five, looked less, and stood listening to McMurdo outside the brick-and-board hut that served as office. Sperry saw Jim and beckoned.

"We're going to look at your find!"

Jim realised McMurdo had probably hinted that the delay, broken saw, and whole affair, was somehow his fault and responsibility, and felt a flash of anger.

"Didn't examine the tree much meself, Mr. Sperry," McMurdo said as he led them towards the band-saw building and gantry. "The kid told me it was clear—"

"I showed you the mark!"

If McMurdo had heard, he did not indicate it. "Likely it's a bomb," he stated. "Suppose it had exploded when the saw got it?"

He halted expressively, and Sperry gazed at the projectile-like object. Uneasy, Jim waited, hoping he would at least not be sacked. Not fair, he thought Then surprise substituted personal concern as his gaze strayed over the egg-shaped discovery. A circular port wide as his palm stood open, revealing a glimpse of intricate machanism.

"*Something* was in it!" Jim whispered, shocked.

He saw doubt in Sperry's clear grey eyes; then saw it change to understanding. The object was a vessel, and its owner had emerged . . . Jim's gaze darted round the timber yard. Piles of boards stood silent in the hot afternoon sun; some men watched Sperry, while others were replacing the broken saw. A thousand hiding-places, Jim thought. And, beyond, open fields, hedges, and, in the near distance, the long wood, a hundred acres of trees and undergrowth.

Sperry ran for the office, disappeared, and Jim heard him phoning. Within minutes he was out.

"I've called the police! Some of you stand guard outside and we'll search the yard!"

Some took up sticks, and Jim guessed their thoughts. The exit to the tiny vessel was only as wide as a man's hand. Jim bit his lips as they began poking round the piles of timber. Almost like a rat hunt, he decided bitterly. If you see anything you don't understand, kill it! The men looked uneasy, but strangely enough he himself felt no fear. He desperately hoped no sudden scuffle would arise, no abrupt cry of triumph There would be a wild battering of sticks—*something* beaten flat into the earth and sawdust.

Two police cars arrived and officers looked at the tiny vessel.

"Surround the mill," someone said. "A cordon. It can't have had time to get away!"

A wide, tall man with inspector's chevrons nodded. "Might be a good plan to contact the military barracks—they'll have more men than we can find!"

They drifted from earshot. *Catch and kill first*, Jim thought. *Investigate and ask endless questions after!* Every man present would strike first, because in his secret heart he was afraid. Even McMurdo, bearing a stick with which he could have snapped a sheep's back, looked scared. Jim felt no fear, but could have wept as he thought of the tiny ship, token of sciences and techniques unknown to mankind. Afterwards, men would tear into its interior, learning a little and destroying much.

Within the hour military lorries had brought troops that deployed at a respectful distance round the yard, straddling road and fields. Every officer examined the tiny ship on arrival. Bayonets fixed, soldiers pried among the stacked wood and unsawn trunks, kicking walls and boards, thumping rifle butts, as if to startle out a hiding rabbit.

The afternoon passed and Jim heard no quick cry of triumph. A group of senior officers and technical experts gathered by the tiny vessel, kneeling to peer in, but touching nothing. One introduced a mirror on a handle and declared it empty. They went away, returning an hour later with a lorry-load of equipment, which workmen carried into the yard. Watching, Jim saw that humanity must inevitably succeed in its policy of destroying what it feared and did not understand. When all was finished infra-red rays laced the surroundings of the vessel from every angle. High explosive, with charge and firing-wires, was buried in a hole scooped under the ship.

"Give orders no one is to come within five yards of it!" the officer in command said with satisfaction.

They dispersed, leaving the booby trap set, and the ship invitingly unwatched. Depressed, Jim decided that not even a mouse could have crept into the open port without blowing the whole sky high.

Silence descended slowly on the yard. The men went, and the troops moved back, disappearing behind trees and hedges as the evening sun sank. In the empty yard the ship waited the return of its owner.

From his hiding place on top of the gantry Jalit reviewed his position. Awaking from a sleep so deep as to be almost a suspension of life, he had felt an abrupt rasping upon his ship's hull. The vibration had ceased quickly, but was soon replaced by dull, thudding blows. A glance at the auto-mechanism records showed he had made planet-fall in a system other than that intended, and long before the scheduled time for awaking. Over the sub-radio he engaged in a burble of debate with his fellows. The anticipated

expansion of their sun into a super-nova was still likely. Nowhere in the Ursa Minor group could be found a suitable planet. Therefore his search must go on. If the world he had reached in error was habitable, his companions would stream across space in their thousands of millions, to reach him. The initial auto-mechanism report on conditions had seemed favourable Perhaps so, Jalit agreed, but first he must investigate in person. He might find native species requiring elimination, or some difficulty so far unexpected.

The thudding had ceased. Silence returned, broken by occasional tapping, then a sense of motion. When all had again grown quiet he had opened the ship . . .

From his position on the gantry Jalit let his circle of awareness expand. The hot sun that had shone upon his back as upon a puddle of rainwater was ideal, and had revived him. Almost transparent, faintly blue, and flat as a tiny carpet, he had felt rings of fear and hate spread and move below, tangible as the great fish swimming in the pools of his home world. The three pink dots whose interaction made up the centre of his awareness had glowed and weaved in intricate complexity within his transparent envelope, and for a little while he had been afraid. The fear had slowly gone, the bright dots subsided into accustomed patterns of thought. The creatures below the gantry were lowly, mere physical entities with rudimentary senses.

After a time the number of creatures increased and for long periods Jalit shut himself off from consciousness of them, and awareness of their terror and unease. Later, after he had slept, the swirling current of hate and fear had subsided. The natives had gone. He lay motionless, pulsating in and out the periphery of his consciousness. As it wavered and spread, sweeping back and forth, he saw that many of the natives waited behind remote clumps and lines of bushes and trees, their attention directed towards him.

He let his circle of awareness collapse, and crept along to the end of the gantry, extending over the girder a pseudopod adapted to ocular investigation. His vessel lay intact, apparently undamaged, and unguarded. Once inside, he could take it skywards at a velocity soon reaching many multiples of the speed of light.

He lay still, pink dots oscillating. First to decide if the planet were suitable for his species. Other travellers had gone to galaxies unutterably remote, and returned without favourable news. His duty must come first, personal safety second.

Using the ocular pseudopod, he flowed slowly down a vertical girder to the earth. The pseudopod revealed the inert physical world around him, discerning machinery stacked boards, and a long building in the fading light. Temperature, humidity, air and soil were ideal, he thought. Judging from the natives' constructions and machinery, they would offer little useful opposition, as a species.

The sensation of the living trunks, still unsawn, all about him brought a great tranquility into Jalit's awareness. His companions would doubtless want the whole planet covered with forest. When emigration began, the thousands of huge ships would carry seedlings to plant, forerunners of mighty trees which would spring into five-hundred foot giants within a decade. His fellows would be enthusiastic about the early sub-radio reports, Jalit thought, and preparations would have begun.

He rested a while on a felled ash, absorbing the intangible vibration every tree emitted after solar irradiation. The black waves of fear and hate in the natives' minds had gone and the deserted mill lay silent.

After a time he folded in the ocular pseudopod and let his circle of direct awareness extend slowly, spreading in concentric rings to take in the machinery, building, and the vessel that had brought him so far. As his perceptions washed over it, the transparent envelope of his body jerked as with physical shock. An impassible network of radiation hung round the tiny ship—linear rays far removed from the visible spectrum with which the ocular pseudopod dealt. Panic washed through him. The rays were undoubtedly a trap . . .

For a long time he lay silent and motionless, then he carefully searched the vicinity of the ship. The rays issued from devices hidden among the wood, and fell upon other windowed boxes concealed by artfully placed boards. He tried to move a small plank, but could not. His physical strength was almost infinitesimal, the mere interacting of the orbits of atoms forming his being. If he could not reach the ship, he could never return to his fellows, he thought regretfully. But they would come to him, eventually. The sub-radio would broadcast regular analyses of surrounding conditions. Specialists in remote Ursa Minor would note the changes of temperature and humidity, translate them into terms of the rising and setting of a suitable sun. Then, driven by need, they would sweep across the wilderness of space.

Abruptly he grew aware of a second source of consciousness fairly near, approaching. He retreated quickly to the gantry, hesitated, and flowed up the nearest girder to the rails above, where he

extended the ocular pseudopod over the concealing metalwork and waited. The approaching centre of awareness seemed to have only very little fear, and no hate Above all predominated extreme curiosity and great compassion.

Jim hesitated at the yard gate, looking both ways to see if anyone remained to observe him. Apparently he was alone. No-one wished to remain in the yard during darkness, and the cordon was away at a presumed safe distance.

A thin moon had risen, sometimes hidden behind slow cloud. Jim halted by the shadowy timber wagon, listening. Back down the road a picket had halted him, but Jim had expected it.

"I work at the mill," he said. "I left my lunch tin and want it for tomorrow."

An officer had come from a vehicle parked behind the hedge. He nodded curt recognition.

"I've seen him at the yard, sergeant."

The man let him pass. "If you want to go back, that's your business, son."

His tone implied mild doubt at the sanity of anyone wishing to go to the mill in darkness, and Jim felt contempt as he hurried on. A single glance at one tiny ship had scared everyone, except perhaps Mr. Sperry and himself!

He passed the wagon and flashed a torch over the vessel from a safe distance. The infra-red ray projectors and cells would not be noticed, unless one were suspicious, he thought. It was fortunate the vessel's owner had not tried to return.

He examined the set-up carefully, following the booby-trap wires and going into the adjoining building, where some of the equipment stood. The safest method was to interrupt the main supply, he decided. Projectors, relay equipment, and firing mechanism would all become inoperative together, rendering the trap harmless.

The electrical control equipment for the mill was in a hut near the office, and it was locked. The door was too stout to be forced, but an emergency power cable had been brought out under it, and ran across to the booby-trap equipment.

He went round the hut, shielding his torch with a hand, and found the window shuttered and fastened. Back at the cable, he stood in darkness, gnawing a lip in indecision, then returned to the main building, where tools were frequently left. Someone had been unusually tidy, there was only a cleaver with wide blade and very short wooden handle.

He took it back, gingerly lifted the cable, and placed a block of wood under it. He hesitated a long time before raising the

cleaver to strike. The movement brought his head up. Outlined by the dim moonlight, high on the gantry, a transparent eye was regarding him. The sight so astonished, the downward movement of the cleaver was not halted. His fingers touched the metal he had tried to avoid, and the blade struck the cable. Something spat; the cleaver jerked explosively and agony fled through his body, throwing him backwards, unconscious before he struck ground.

He awoke with the excruciating shock gone, and a queer feeling of tension in his legs. Struggling to rise, he saw a faint pencil of blue light extended from the ship's port to his feet. It snapped out, the tension ceased, and he saw he had been dragged well clear of the severed power cable.

A shape glided out of the port, seeming to flow over the earth, transparent, and with three vivid pink dots dancing like fireflies within it. Jim staggered up, glad that the booby trap was off. The joy seemed to wash from his mind into that of the alien, and return intensified, and he knew that his purpose in cutting the wire was understood.

Far away down the road a light shone momentarily in the sky, followed by the sound of a revving engine. Someone coming to find why he had not returned, Jim thought.

The alien had halted, standing upright, almost as high as his knee. A living vortex of sentient awareness, it was waiting, and Jim gestured at the ship.

"Go! Escape!"

Though his words might not be understood, he sensed that his thought was. The alien lowered itself and flowed over the ground, halting at the stern of the ship. A wave of despair and helplessness came from it into Jim's mind.

He followed, bent down, and shone his torch on the stern. A chain, stout shining steel, had been looped round the cross joining the ship's fins. He followed it quickly, scuffing aside the sawdust. It passed round the nearest upright girder of the gantry crane, and was secured by a padlock.

"I didn't see them fix it!" Jim felt this was more final than the booby trap. The ship might pull free, but at what damage to itself?

"*I cannot go,*" a voice seemed to whisper in his mind.

Headlights bobbed into view along the road, slowing as the vehicle approached the mill. No tools to cut the chain, Jim thought. Nor time to use them if there were. Again erect, the alien was facing the road, an elongation with a single eye extended above its head, moving slowly as it observed developments. The

vivid dots within it danced wildly, and Jim felt that it was a peaceful being, unused to violence or personal danger, usually placid, harming no-one. It had drawn him clear of the cable, perhaps saved his life. His gaze flickered once again from the tethered ship to the gantry, and an idea came.

"Get inside and wait!" he cried.

He ran into the mill. The master control switch in the locked hut was on, to provide current for the booby trap. Therefore the circuit to the mill distribution equipment would be alive. From the armoured board switches controlled all the electrical machinery in the yard. He jerked down the gantry lever and ran back into the moonlight. The alien was just inside the ship, its eye projecting through the port.

A vehicle halted, and Jim recognised McMurdo's voice, yelling for him to come out if he was at the mill. Pull-cords dangled from the gantry, controlling its traverse and hoist motors. Jim manipulated them so that the crane began to rumble along the rails, its hoist cable descending. A shout proved the noise was heard. The hook seemed to fall with painful slowness. Jim dragged at it, got its point through links of the chain holding the ship, and grabbed for the cord which would make the powerful motor wind in. Simultaneously feet pounded round the building and a human mountain bore him to the ground. The cord fled from his grip, and the hoist motor stopped.

McMurdo sat on his chest, breathing furiously and pounding his head until stars flew. Jim tried to dislodge him, and failed. From the corner of his eye he saw the alien crouched within its ship, the port half closed, and Sperry appear round the building, a torch in one hand.

"This will take some explaining!" McMurdo stated, and hit his head again.

Jim struggled to get up, or to reach the cord dangling mere feet away. He landed a glancing blow on McMurdo's chin. McMurdo swore, a fist raised, his knees gripping Jim.

"Hit me, would you!"

The fist came down . . . halted. A sudden feeling of power and determination washed through Jim, and simultaneously McMurdo winced as if struck from behind.

"*Punch his throat, at the side!*" a voice seemed to order.

Jim punched, something guiding his hand. McMurdo howled, his head shot back, and Jim heaved him off, straightened, and seized the hoist control rope.

The motor whirled, powerful gearing that could hoist twenty tons dead weight whining. The cable and chain grew taut. The motor seemed to hesitate, the gantry shivered, then with a crack

the loop of chain failed, rattling away simultaneously from fin-stays and girder. The vessel port began to close its crack, and a wave of thanks swept out to reach Jim.

An interplay of green and pink light began under the ship, and it rose vertically, slowly at first, then gaining speed. The nose began to turn heavenwards, and a glow began at its stern. A moment later it had gone from sight like a rocket, and the whine of motion faded.

"So that's the idea you had, young Donnels," a cool voice said.

Jim spun round and found Sperry regarding him quizzically. Excuses and explanations sped to his lips—then he realised they were not required. Mr. Sperry had not tried to hinder him as the gantry hoist had grown taut . . .

Sperry smiled slightly, looking heavenwards. "That's rather how I felt about it, lad." He looked at McMurdo, who sat rubbing his jaw. "I'm not sorry to see him taken down a peg, too. He's been throwing his weight about too much for a long time."

His hand closed on Jim's shoulder, guiding him towards the road. "I caught a little of what our visitor thought about it all, before he left. His gratitude may be worth a lot. Meanwhile, we'd better agree on a story to tell the police, as it'll be our word against McMurdo's."

He chuckled.

Jalit set in motion auto-mechanisms which would guide his ship back to Ursa Minor, and give him the release of unconsciousness throughout the long journey. Peace-loving, a long time would pass before his danger, now over, was forgotten. The millions of his companions would have swarmed over Earth, ousting indigenous life by mere numbers, just as their giant trees would eventually destroy native vegetation, stifle it below their vast branches. Within a century any planet occupied by Jalit's companions would be devoid of all original life forms, animal or vegetable.

He settled on the sleeping couch, keying the sub-radio to send back a message across the wilderness of space. *I have investigated in person. An indigenous life-form saved me from distress and possible death, at danger to itself. We cannot colonise as it is not our policy to destroy any native species capable of good, but only those creatures incapable of such acts. Therefore we must seek elsewhere.*

The burbling across light-years of space ceased. The tiny ship gained momentum, soon travelling at many multiples of the speed of light. The sol-type sun was lost behind. Jalit slept, his vessel a hurtling mote between worlds.

George Longdon

As a lecturer Alan Barclay has a good insight into the mental make-up of students who attend classes—whether they follow instructions when converting theory into practice is entirely a different matter, however. And should the lecturer have practical experience of his subject, or is theory sufficient?

THE NEUTRAL

By Alan Barclay

Illustrated by EDDIE

Major William John Carew surveyed his class with feelings of mingled disgust and despair. This particular mixture of emotions is not at all unusual with teachers and lecturers, all of whom at one time or another have been driven to ask themselves whether they ought to abandon their profession and take up the trade of taming wild elephants instead, but William John Carew had more reason for despair than most, for his audience resembled a group of large frogs.

True, they were all about five-feet-six in height, and their round bald skulls gave indications of containing a greater number of brain-cells than a frog usually possesses, but otherwise, seen through the wrong end of a telescope, they might be mistaken for frogs.

His disgust with them could not be attributed to their lack of interest in his lecture, for they sat in silent rows—there were eighteen of them—with their pop-eyes aligned upon him with deadly accuracy, listening with every appearance of complete attention.

He had been lecturing on combat manoeuvres, curves of approach and angles of attack. He was particularly expert at this subject, having been sent out from Earth on attachment to the government of Pelleas to teach it. He had been talking for an hour as lucidly as he could, and had illustrated his descriptions with carefully planned diagrams, but he had a strong feeling that not one of his pupils understood a word of what he had said.

"Of all the problems a pilot has to worry about," he concluded, "fuel consumption probably takes priority. He and his ship are expensive items. It has cost a lot of money to train him and to build his ship and he has no right to be careless with either of these items. Whatever manoeuvres he undertakes, whatever pursuits he becomes involved in, he must constantly be calculating the margin of fuel needed to make his base. A ship and pilot floating in space without fuel must count as a score to the enemy." He paused and looked around. This was the moment for questions.

"May I ask a question, sir?" one of the frogs asked.

"Go ahead," Carew told him, sourly. One could perhaps become reconciled to the appearance of the Pelleans, but one could never get used to hearing their clear, deep, manlike voices. The shock of surprise was especially great when the deep manlike voices used excellent English, as most of his pupils did.

"Have you yourself carried out any of the manoeuvres you describe in action, sir?"

"The straightforward answer to your question is 'Yes!'" he replied. "In addition to the theoretical work which I have been teaching here I passed the Terran Space Fleet's practical course of Combat Manoeuvres and Navigation. In that sense I am no mere theoretician. But I suspect your question really means, have I ever been in action? Have I ever tried out these methods in real warfare? The answer to that question is 'No.' Three hundred years ago our race fought a space-war with an invader in our system, but since that time we have had no war."

"Thank you, sir," the questioner said, then continued: "Do you not consider that this importance you attach to conserving fuel, of taking care to break pursuit in good time and of continuously making calculations of fuel consumption to ensure a safe return to base is cowardly? We think so."

"There is this difference between us and you," another student spoke up. "You talk about combat manoeuvres as if they were a kind of sport . . . We on Pelleas are face to face with a real enemy, and most of us here may very soon be carrying out attacks in real earnest to defend our people."



Carew was essentially an honest and conscientious instructor, and could never dispose of a difficult question by means of some sweeping generality.

"I have already explained that neither myself nor any other living Terran has had experience of real warfare," he began carefully. "I admit that the real thing, when it comes, is likely to differ considerably from practice manoeuvres. But I think you must agree that although practice manoeuvre experience is the only sort we have at the moment, it's a great deal better than no experience at all. As regards your other question," he went on, resisting a powerful inclination to beat his head against the wall, "I'm not preaching cowardliness, self-interest, or over-caution. I'm merely urging the necessity of economy in the use of men and ships. Neither you nor your ship belongs to yourself alone. Neither your life nor your ship must be lost through negligence or foolhardiness." He was on the point of concluding with the old tag to the effect that he who fights and runs away lives to fight another day, but decided that this also would almost certainly be misunder-

stood. He looked around at the frog-like green-complexioned faces and felt that this concluding explanation had entirely failed to penetrate.

"Oh well!" he shrugged, "at least I draw pay for it."

"Class dismissed," he said aloud.

Although there was a very considerable technological and scientific background to Pellean society when the Terrans first contacted the planet, its people were far from achieving space-flight on their own account. This they had learned from the Terrans. Their Space Development Centre where Major Carew held his lectures was accordingly a disorderly huddle of buildings, laboratories, test blocks and store-houses hastily erected and added to without much plan over the last fifty years or so.

Major Carew, having finished his lecture, put on his hat, tilted it to the correct angle, straightened his uniform, and left the lecture block. He walked around and about the buildings, stepping occasionally across patches of mud and puddles of rain-water until he reached the vehicle garage. An official car driven by a native chauffeur was waiting to take him to his quarters. The vehicle was powered by a steam motor. This engine ran smoothly and silently enough, but the springing was of bullock-cart design, well-suited to the rough surface of the road. They made a steady fifteen miles an hour.

Carew had rooms in a hotel which was a government undertaking provided for the use of Terran visitors to Pelleas. As far as possible, although only native foods were available, earth-style meals were supplied, and accommodation and services were nearly equal to Terran standards.

Carew washed and changed in his room and went down to dinner, feeling relaxed and at ease to be once again among humans.

"Well, what's the news, Anderson?" he asked one of his neighbours at table. Anderson worked in what was called the Terran Agency, in reality a sort of Embassy through which official contact was maintained between the Pellean government and Terran officialdom.

"Nothing really new," the latter reported. "Just a little more each day of what we're having already. There's not the slightest doubt the invaders are establishing themselves and concentrating in force on the Other Planet." Anderson meant the only other planet of the sun of Pelleas. The native name for it was something the Terrans had never managed to pronounce and so in their conversation it had come to be the Other Planet in capital letters.

"That might be their only intention," Carew suggested, not because he believed it, but simply because it was customary for someone to say so at some stage in this sort of discussion. "And if so, and since it's an unoccupied planet, why not?"

"It's unoccupied all right," Anderson admitted, "but it's unoccupiable, as you know very well, for it's without atmosphere. It's being prepared as a stepping-stone, or a beach-head, I'm convinced of that."

"We still don't know who these invaders are, I suppose?" Carew asked.

"They're the Hammerheads—the same race our ships have encountered in other sectors." Anderson assured him positively. "Must have had faster-than-light drive centuries before we did. Very advanced level of technology, but none of the moral maturity required as counterbalance. Just imagine Attila and his Huns equipped with a space-drive and a multitude of fat defenceless planets to plunder. That's the Hammerheads."

"If these *are* the Hammerheads—" Carew questioned stubbornly. "Nobody's determined that."

"Not yet," Anderson agreed. "One of the Pellean ships went out to the other planet last week to try to make contact."

"And didn't succeed?"

"Not in any satisfactory fashion," Anderson told him grimly. "A flash of light was observed about the time the ship was due to arrive, and it hasn't reported back. That's all."

"So what's next?"

"I understand one of our own ships is being sent out from Earth to make contact," Anderson told him, with the manner of one disclosing up-to-date gossip.

"So very soon now observers are liable to detect another flash of light over by the Other Planet," Carew said sarcastically.

"That's possible," Anderson admitted, "but not inevitable. We've been in contact with the Hammerheads before in other sectors on several occasions. If our ship's captain is careful we should manage to avoid any shooting and exchange a few ideas."

"Ideas such as what?"

"Such as what they're doing in this corner of the woods."

"Suppose they say they're here to take over Pelleas, what do we do?"

Anderson fiddled with his knife and fork and looked a little unhappy.

"Naturally I don't know. That's a thing our big brains back home must decide, but I guess we'll do nothing."

"You mean we'll move carefully over to one side so as not to get in their way while they take over this place? Not very admirable, eh?"

"I don't like it any more than you do," Anderson confessed.

"If the Hammerheads continue their expansion we've got to fight them sooner or later," Carew said. "Why not now, while we still enjoy some respect among the local frogs? Heaven knows I don't love them, but I love the idea of running out on them even less."

"As I've said already, I don't know much more about policy than you do, but my guess is we're not ready to fight the Hammerheads yet. They're still ahead of us in ships and armaments, and out here we're very far from home bases. I'd say our policy is to keep playing for time, trying to postpone the inevitable clash between ourselves and the Hammerheads for another ten or twenty years while our strength is built up."

"That's wonderful in theory," Carew admitted, "but rather too clever and too calculating for my liking. I wonder whether it isn't better sense to stand by friends and allies, to go to the help of the little fellow who's being hammered by the bully, regardless of the consequences."

"Unless a miracle happened the consequences would be pretty final for humanity if we intervened in this affair," Anderson said grimly.

"Miracles sometimes do happen," Carew told him quite seriously. "To those who deserve them."

Anderson looked at him with some curiosity.

"You feel pretty strongly about this, Carew?" he observed. "I thought you disliked the frogs and I thought you weren't enjoying your stay on Pelleas very much?"

"I don't like them, and I never wanted this appointment," Carew told him bluntly, "but that's got nothing to do with the fact that I don't like running for cover when shooting starts. We humans are getting out and about around the galaxy nowadays; we're meeting other races and earning ourselves a reputation. I want it to be a good reputation."

"What's the use of a good reputation to a race that gets itself reduced to slavery or even entirely wiped out on account of being too damn chivalrous?"

"What's the use of staying in existence if we don't live up to the best in our natures?" Carew countered, stubbornly.

"That's altogether too deep and too metaphysical for me," Anderson confessed. "And all theorising apart, I think it's very likely we'll be ordered back home quite soon."

"Leaving the frogs to their fate?" Carew stated rather than asked.

"I'm afraid so . . . Nevertheless, I expect you'll be happy to go. You haven't seen your wife for three years, have you?"

"Nearly that long. Yes, I'll be sure glad to see her again."

Carew spent the evening in the lounge of the hotel, turning over a micro-stat magazine from home and considering Anderson's remarks. He had never enjoyed the life on Pelleas and his appointment here on the fringe of the Terran universe meant that he could be overlooked by the powers that arranged promotion. It would have been different if Jennifer had come out with him. He would have felt more settled then, and might have managed to interest himself in native problems. Some of his fellow Terrans had become enthusiastic researchers into Pellean evolution and social history and were already recognised as experts in such matters.

His own existence here had been a sort of blank interlude in which, apart from his lecture work, he had done nothing but wait for mail home and think up new reasons why Jennifer ought to be able to come out to him. But, he reflected, this long period of empty waiting was coming to an end. According to Anderson all Terrans on Pelleas were about to be ordered home.

His imagination began to spin a web of fancy around this thought. He would undoubtedly be given a ground appointment, perhaps at Moon Base, when he got back. Yes, it would almost certainly be Moon Base. This meant living in Luna City, which in the last twenty years or so had developed into one of the most delightful and elegant and sophisticated cities known to men. He might rent one of those attractive cliff-edge flats. With Jennifer, of course. They would be together at last.

At various times he had devised schemes in which he and Jennifer might resume their life together again, and often—not nearly so often recently, however—he had proposed them to her in letters. None of them had aroused her enthusiasm. Her replies had invariably been full of objections. But this time it was bound to be different, she would scarcely say No to the opportunity of life in Luna City. Carew brightened again at this thought. Sometimes his thinking about Jennifer led him along a road at whose end lay the conviction that his wife was a pleasure-loving, no-good, self-indulgent so-and-so, whom he would long ago have divorced had he been living a normal life at home. But he never allowed himself to pursue this line of thought to its conclusion.

He went to bed that night in a state of considerable cheerfulness and dreamed of a cliff-edge flat in Luna City with Jennifer and himself having breakfast together on a balcony overlooking the wide floor of the canyon. Neither the alien Hammerheads, concentrating their forces on the Other Planet, nor the unfortunate frog-like Pelleans whom they probably intended to reduce to slavery, figured in his dreams at all.

For a time things seemed to remain just as they were. The only evidence of swiftly moving events consisted of occasional flashes of light around the Other Planet, and signs, detectable only to Pellean observers out in space, of considerable constructional work in progress there.

No sign of the expected Terran ship was observed within the Pellean system, but some weeks later Anderson told Carew that one had arrived—and gone again.

"With what result?"

"How should I know? Down here on Pelleas we got just a curt military-type signal to say it had arrived, and another two days later to say it was on the point of leaving. We presume some conversation has been held and that our ship got safely away."

"And what now?"

"In my opinion it will be decided not to intervene in this Pelleas-Hammerhead affair. All of us, military and civilian, will be recalled from Pelleas within the next couple of months."

Carew had no great understanding of human nature, so it can be well imagined that he had very little idea of what went on inside the alien heads of his Pellean students. Nevertheless, even he was able to detect their growing lack of interest in his lectures. Soon they would be committed to real battle. Then, as Carew admitted himself, they would learn—if they lived—more about curves of approach and attack angles in the brief screaming excitement of one combat than he could teach them in a year of lectures. Notwithstanding this he continued his lectures conscientiously. Some of the theories he was trying to put across might serve them in good stead, might help them to stay alive through their apprenticeship in battle.

Very soon the number of his lectures was reduced so that student-pilots would have more time for actual practice manoeuvres out in space. He began to feel more and more useless around the depot. The native Pellean officers became increasingly busy. There were continual shifts and changes of personnel, so that every other day a new frog-like face was occupying some office Carew had dealings with. The majority of the Terran officers attached to the depot frankly gave up trying to carry out their duties, packed their

kit, and hung around waiting for orders to return home, orders everyone was expecting at any moment.

Up till now the enemy, the Hammerheads, had remained very much of a legend, an invisible threat. No evidence of their existence was available to the ordinary Pellean on the ground. No Pellean had ever seen a Hammerhead. Although they translated this Terran nickname into their own language and used it to describe the enemy, they did not know whether it should be taken literally or not. Real evidence of the existence of the enemy continued to be very technical—flashes of light seen via telescopes on the surface of the Other Planet . . . the arrival and departure of deep-space vessels detected only by a Pellean scout-ship's radar while out in space. Signs—these also only visible to scout-ships—of constructional works on the Other Planet. That was all. Until one day a space-ship was observed in the skies above Pelleas. It circled the planet at a height of about a thousand miles, on a polar orbit.

It was allowed to do its work, probably the survey and mapping of the planet, unmolested, but the first stages of evacuation of the civilian population from the towns began.

"What follows now?" Carew asked. "Death and destruction from the skies, I suppose?"

"Nothing like that, I should think," Anderson shook his head. "The Hammerheads have no intention of destroying the planet. They want to take it over with all its wealth and resources undamaged. They don't even want to kill the natives. Their procedure is to reduce a planet to submission as painlessly as possible, then colonise it with their own sort. The natives are reduced to servitude while the conquerors form an idle, leisured property-owning class. They'll plan to avoid massive destruction, unless of course they meet with enough resistance to make them peevish, then they might turn vicious. I think they'll make a landing somewhere and try to establish a bridge-head. After all, the ancient difficulty about fighting a war with extended lines of communication bothered military people during the days of land warfare back on Earth, and it applies with even greater force in space-warfare."

"Why?" Carew asked. "I should've thought that with modern transport the supply problem would become easier."

"Not at all. The mediaeval land army could at a pinch live off the country it fought over—Napoleon's forces did so—but nobody can make a good meal off empty space."

The Hammerheads did attempt a landing as Anderson had foreseen.

A big ship escorted by a number of smaller craft came down through the Pellean atmosphere, lowering itself gingerly on flaming jets.

At the most critical moment of its descent, a Pellean ground battery opened fire on it, aiming at its motor chamber.

The big ship instantly blew up.

"Well!" Carew exclaimed with considerable admiration when news of this was made known. "Good for the frogs! No time wasted in attempts at negotiation, or in lodging of protests. I think I like that."

"It won't look so good if the Hammerheads are driven to indiscriminate destruction of towns," Anderson objected. "By the way, Carew, a couple of our ships arrived in the system today and they'll be touching down any time now. I've every reason to suppose they've come to evacuate us. So you can expect to get your orders to return very soon."

"Just like rats leaving the sinking ship," Carew said, looking up at the Pellean sky beyond which there hung the menace of the Hammerheads.

He lay awake that night dreaming of his return to Earth. He allowed himself once again to imagine a future featuring a flat in Luna City and breakfasts on the balcony with Jennifer. But this time he found it less easy to persuade himself that such a situation could really come to pass. Then for a hasty, guilty moment he let himself contemplate the same sort of future, but with one major amendment, namely that Jennifer was removed from it—divorced, sent away, banished, forgotten—and a new wife substituted in her place, someone sweet and young and admiring of himself, who would listen affectionately to his stories of life on alien planets. But the flavour of this idea quickly nauseated him, and the imagined young face quickly dissolved and took on the appearance of Jennifer's.

In the morning he got a message ordering him to finish off his business at the Pellean Space Depot and report as soon as possible to the Terran Agency for transport up to the ship that had come to take the Terrans back home. As he re-read the message he had no feeling of elation. Now that his return was assured, he knew with cold certainty that his fond imaginings of the night before were sheer nonsense. Jennifer would never return to him. He and she would never have that flat together in Luna City. And as for the new young wife he had been offering himself last night as a sort of consolation prize, he wanted nothing of that.

In his room in one of the instructional blocks at the Space Depot he packed up his lecture notes and diagrams. His space clothing, never used since his work on Pelleas had been confined to lecturing, was still in its container, so there was nothing requiring attention there.

He walked across a yard and into an adjoining block where he sought out the Pellean officer in charge of instructional courses. He explained that he had been ordered to leave and tried to express his regrets. This Pellean, however, did not speak English very well, and appeared to be busy and excited. Carew was out of his room again with scarcely a word exchanged.

In the yard he encountered a group of young Pellean officers wearing space-scout insignia. He had never learned to distinguish one Pellean from another, but they knew him and saluted, so presumably they were his pupils.

"You are leaving, sir?" one of them asked in his deep baritone voice. "We are told you have been ordered to return to your own planet."

"That is quite true," he agreed.

"We on the other hand will very shortly have the opportunity of putting your excellent teachings into practice."

He supposed that this was intended as impudence, but did not really care very much. "It will be some little time before you have the chance," he said vaguely.

"Not so long, sir . . . Tomorrow, perhaps."

"What's that?" he asked. "Your training is only half completed."

"That is quite true, but the enemy is threatening our planet, no doubt you have heard?" This time the impudence was beyond question. "We have volunteered for immediate action and this has been agreed. Some of the training ships are being armed and prepared for patrol work."

He looked from one frog-like face to another. For a moment it almost seemed as if the faces were human and boyish with familiar expressions that he could read and understand.

"But you aren't fit for battle yet! You're only half trained. You'll be killed!"

"Possibly," one of them replied. "Many on Pelleas will be killed quite soon. But you will be on your way back to the rich and safe and comfortable planet you came from."

"You're wrong there," he said quite gently. "Boys like you aren't old enough to go around in space by yourselves. Your teacher is coming along to look after you."

It took very little arranging. The Pellean military organisation was recently formed and not over-encumbered with rules and regulations. In the present crisis it was more than willing to have a skilled and experienced scout pilot.

Carew telephoned Anderson and told him of his sudden decision.

"You're crazy!" Anderson said for a start.

"No doubt," Carew agreed, "but I seem to enjoy my own company better in that state. I never did like this running for cover."

"I thought you were dying to get back to your wife?" Anderson tried again.

"You know what? I've got a new angle on my wife," Carew replied quite happily. "Do you know what my wife is?" He explained what he now thought about his wife, in words mostly of one syllable. Anderson did not attempt to disagree with this for he and everyone else had held that opinion for years.

"You'll be in trouble with your military superiors," he cautioned Carew finally.

Carew laughed. He was not a man who laughed very often, and this time he laughed because he thought he was unlikely to remain alive long enough for trouble of that particular sort to catch up with him, which was perhaps an unusual reason for laughing.

"Tell them I've resigned."

"Oh, well," Anderson concluded ineffectually. "Good luck!"

"Thanks," Carew replied.

Two days later he was out in space on patrol between Pelleas and the Other Planet.

There will always be some doubt about the claim subsequently made that he led the first air attack against the Hammerhead ships, because the latter made a series of almost simultaneous attempts to land, sending down groups of big ships escorted by fighters.

Carew, leading his scratch squadron of converted training ships and half trained pilots, sighted one of these enemy groups at a point about midway between the two planets. There were three big ships designed for planetary operation, and around them like a swarm of bees, an escort of small fighters.

Carew, or to be precise, his second-in-command, for he himself could not speak the Pellean language, signalled back the position and number of the enemy and his intention to attack at once.

"Well, men," Carew told them over his intercom, "you've all heard me lecture you on curves of approach and angles of attack. So now you'll be considerably amused when I say that none of that stuff is applicable to our present situation. This is an invasion

The title of this month's article is self-explanatory, yet despite its original widespread publicity in the popular Press, it is still a fascinating subject—especially when presented in the following manner.

THE CLUE OF THE COELACANTH

By Kenneth Johns

“If only,” dreamt palaeontologists and zoologists,” “we had a live specimen, a living fossil, with which to check our theories.” But, of course, that was impossible. Life forms change and evolve and the wonderful creatures that inhabit our Earth millions of years ago died out with the coming of new and better forms. After all—that is what “extinct” means.

And then Miss M. Courtenay-Latimer, the curator of the museum of the South African port of East London, found a strange, awkward-looking fish among a batch of sharks just landed by local fishermen. The date was December 22, 1938, A.D. It could have been anywhere between 400 and 70 million B.C. Miss Latimer was fascinated by the fish. When she could not identify it she consulted the noted zoologist, Professor J. I. B. Smith, of Rhodes University College of Grahamstown.

On seeing the coelacanth, Professor Smith was seized with the vision of a dinosaur walking down the main street.

Quite apart from the sensational and unlikely aspects of the "living fossil," here was the opportunity for which palaeontologists and zoologists had prayed. Here was their "extinct" fossil miraculously preserved and brought back to life. Here was the oldest living creature, a fish that had not changed in 70 million years. All over the world scientists were fired with expectant delight. Professor Smith had leaflets printed and distributed offering rewards for further coelacanth, and hopefully awaited results. Then the war stopped the search and science must needs wait until 1952 for Captain Hunt to report the second coelacanth.

The coelacanth is a member of an extremely ancient class of bony fish called crossopterygians flourishing during the Devonian Period. This period is one of crucial interest for it is the time when some fish left the sea, developed limbs and lungs and became amphibians. The links between the fish and their descendants who invaded the land has been a persistent challenge to science.

Of the four main divisions of fish, two flourished before, and two after, the trek towards dry, or semi-dry, land took place. The first fish of all, the first vertebrates as well, were the agnatha which drew food in through a round hole, and were without jaws or paired fins. They were followed by the placoderms, which retained the armour developed by the later agnatha, and developed jaws and paired fins. After the placoderms came the chondrichthyes and the osteichthyes. These rather formidable names cloak the bony fishes which developed into the species swimming in the oceans of to-day. Exactly how did the fin of a fish evolve into the limb of a dry-land animal? There was the fore-limb of a frog as a sort of half-way signpost. The fins of the fish of today afford no help—a single glance confirms their radical difference. Obviously, the zoologists had to go back to the past and study the fish then alive. They found fossils of the crossopterygians, split into two distinct lines of evolution. There were the Rhipidistians and the Coelacanth. Both types had died out—so it was said—but their study afforded some very interesting facts on fish-fin development, and also on gills and lungs.

The Rhipidistians showed the greatest degrees of change. They had internal nostrils which makes it likely they had some form of lung and could live with amphibians if necessary. Confirming this, primitive amphibians have been found in deposits with them. They had skull and fin structures of a type later vertebrates were to improve upon. This fin was the true half-way mark on the road of change from fin to limb.

As a result of these parallels and mixtures in the crossopterygians, palaeontologists regard them as the key group between sea and land, the group which brought forth the amphibians. And, consequently, us.

So, in the evolutionary family, we are far more closely related to the coelacanth than is at first apparent.

The fin of the crossopterygians, unlike all other fishes, extends on a scaly stalk, working itself on a single mechanism like the single bone of a land animal. Looking at the fin of a crossopterygian, an idea can be grasped of how it changed into a limb.

It is small wonder, therefore, with the fund of scientific information tantalisingly awaiting the discovery of a living coelacanth, that when Captain Hunt sent his telegram the scientific world was electrified. The cable laconically said: HAVE COELACANTH. IN COMORO ISLANDS COME AND FETCH IT. It was Christmas Eve. Professor Smith had no means to charter an aircraft for the 2,000 mile journey and, fearful that the fish would decay in the summer heat, he appealed to the South African Premier for an aircraft. A military plane took him at once to the Comoro archipelago to the north of the Mozambique Channel where the coelacanth, which had been caught off the Island of Anjouan, had been dead nine days. It was not in very good condition, having been embalmed on the fourth day, but it *was* a true coelacanth, and the natives scrambled to hunt for others and so earn more from one catch than they could normally do in three years.

Ironically enough, Professor Smith had prophesied that the coelacanth, which looked like a rock fish, would be found around Madagascar. When Paris heard all this, they immediately ordered the Scientific Research Institute of Madagascar responsible, set up embalming stations, sent out fresh reward leaflets—and Professor Jacques Millot of the National Museum of Natural History in Paris took over.

Result—nine more coelacanth.

They are all members of the same species, to which Professor Smith could at least give his name. The first one was caught off the Chalumna River, probably a straggler from the Comoro Islands, and discovered by Miss Latimer. Therefore its name works out as *Latimeria chalumnae* Smith. It turned out, with one of those little ironies of history, that the natives had been fishing coelacanth for years. They even used the rough scales for tools.

About thirty years ago Edwin S. Goodrich drew what he thought a primitive vertebrate's heart should look like. The heart developed from an enlarged blood vessel, partitioned itself off into four sec-

tions, then curled over in the form of an S and the two rear chambers folded over above the front ones. This is observable in the young embryo of vertebrates.

Working from the assumption that the embryo repeats the cycle of evolution, Goodrich decided that an early vertebrate's heart would be linear, with its chambers one behind the other.

When a good specimen of a coelacanth was dissected, the thirty-year old drawing of Goodrich was a blue-print for its heart. The fish's heart was slightly V-shaped, with only the faintest beginning of the curling over.

In the same way, the pituitary gland, which developed from two bulbs, one in the floor of the cerebrum of nerve tissue, and the other the pharynx of digestive tissue, evolved into a single gland just beneath the brain. The connection with the pharynx is completely broken. In the coelacanth a connecting tube runs from the pituitary through to the roof of the palate. This tube is rich in blood vessels and operates in the production of hormones.

These two examples alone, and there are more to come—indicate the importance in the evolutionary scale of the coelacanth. The very name coelacanth comes from the Greek and means "Hollow Spine," a further indication how far back are these fish in time.

In appearance, the modern coelacanths are larger than those found as fossils. The adults—all that have so far been caught—weigh 70 to 180 pounds and are between forty-eight and sixty-six inches long. The body is covered with strong oval scales, the exact shape, size and coloration of which vary with position on the body. The tail looks as though it has not properly developed and there is a further, smaller, tail appearing at the extreme end. Of its seven fins, only one, the dorsal, is like a normal fish fin. The other six have the peculiar paddle-shape possessed by the crossopterygians and have about thirty fin rays each.

The fish has a heavily built head, with powerful underslung jaw and, living among rocks on the bottom, it can dart out and devour its prey—smaller fishes—whole. Some of these small fish have been found in the living fossil's stomach. From these fish, and the depths at which the coelacanth has been caught, it is believed that they live at considerable depths. They have been caught from 80 to 200 fathoms; it seems logical to assume that the coelacanth lives at about 400 fathoms, among basaltic rocks. Here Professor Millot believes the coelacanth might even be able to walk on its paddle fins, like a seal. He believes they are no great swimmers.

When alive the fish is a bluish-grey hard colour, with white spots. This colour changes rapidly after death, normally to a muddy brown. When alive the eyes are phosphorescent.

When we investigate the history of the coelacanth and realise that it swam the oceans long before the ice-ages, long before the reptiles mysteriously vanished—long before, in fact, they were ever thought of, we are faced with the question: "How did this fish survive?"

A clue, strangely, comes from studies made into national and racial characteristics and the weather. It has been shown that in unsettled climates, people who are more robust, more energetic, more versatile, will develop. The coelacanth lives at considerable depths, where the temperature is colder than at the surface—samples taken from the places where coelacanth have been caught are at near 54 degrees Fahrenheit as opposed to the surface temperature of 79 degrees Fahrenheit. There are rock currents and eddies which, throughout the millions of years, must have brought many changes to the fish's environment—Professor Millot is working on what he terms the "penetration of the secret of the adaptability which has enabled them to live through many geological eras under widely differing conditions without modifying their constitution." Perhaps the answer does lie in the continued change, the versatility through experience, that we note among humans. Certainly, this alone presents a major challenge to science, that the Rhipidistians, the brothers who had all the earmarks of rapid development, became extinct, whilst the staid, plodding coelacanths, unchanging, remained alive for so many millions of years.

Underlying the mystery surrounding the coelacanth's survival is the expected, but still surprising, smallness of its brain. A ninety-pound fish had a brain weighing less than 50 grains, that is, one fifteen-thousandth of the bulk. Although small, the brain is correctly proportioned and is not in any way distorted. This is an example of physical adaptability and prolific breeding maintaining a species when cunning and brainpower have failed.

Fossils of the coelacanth have been discovered as far apart as Great Britain and Brazil and Madagascar. There seems no particular reason that we know of at the present why the fish should be found alive only around the Comoro Islands. Dare we hope that there are more, in other deep places in the seas of the world?

One of the greatest benefits of the discovery was to give scientists—palaeontologists and zoologists—a well-deserved boost in morale. Here they were, digging up old bones, and then erecting grandilo-

quent structures of conjectural flesh, blood and muscles upon them. Could we trust them? All this—from just a few fossils?

A model of the coelacanth, made many years ago, in the British Natural History Museum, bears a breath-taking likeness to the actual fish. The scientists have been strikingly encouraged and their views upheld. From there, the scientists want to press on, unsatisfied with static approval. The theory has long been mistakenly held that an embryo retraces the course of evolution of its race—'Ontogeny follows phylogeny.' True or not, embryos do show a marked similarity with evolutionary growth as shown by fossils—and now by the coelacanth in the flesh.

All right—suppose we studied a baby coelacanth?

Unfortunately, the idea, although very sound and full of promise, has so far not been found practicable, by reason that the fisherman has not yet caught either a baby coelacanth or a female with fertilised eggs. Fish Number 8 was a female, and was brought ashore alive, being put in a sunken whaler as a sort of aquarium. Hope ran high. However, by the time Professor Millot arrived by plane from Madagascar, the Sun had begun to kill the fish. She tried to hide herself in shady corners and sunshine seemed physically to hurt her. The effects of decompression after being brought up from 840 feet down and rise of temperature killed her in less than a day.

Whilst alive and under observation, the fish moved slowly, showing marked manœuvrability of the pectoral fins, giving support to the theory that they may be used as primitive legs. Unfortunately, this female did not have any eggs.

Then, in May 1956, another female with 60 eggs was caught. Hopes were dashed when dissection showed that they were not sufficiently developed to indicate whether the young coelacanth are born alive by the female or whether she lays the eggs to develop deep in the ocean.

But it seems probable that one day a female coelacanth will be caught and kept alive, with the eventual production of baby coelacanths. Once scientists have the opportunity of examining the embryo, detailed knowledge of evolution will be vastly increased.

It seems peculiarly appropriate that this living fossil, preserved for our study through 70 million years, should hail from the time when fish were breaking away from the sea and making a new world for themselves, breathing air upon the dry land—for Man is at a similar crossroads. Before him lies the road between the planets, or he can turn right and become a living fossil on his own planet.

Kenneth Johns

Every once in a while we publish a story whereby it is not possible to give any indication of the plot in the caption without completely spoiling it for the reader. Arthur Sellings' latest story is one such and once again shows his versatility as a writer.

BIRTHRIGHT

By Arthur Sellings

Illustrated by EDDIE

As early I can speak I ask, where come I from?

The god makes face and shakes and says, you ask that. Then straights face and says, you not remember women?

And I remember—memory clear now—the times of dark brightness and happy hurt, and I anger and smash god's face with fist. Fist great and strong. So great and strong like—like I don't know. No things here like. No things here . . .

God mends his face on wall. Iron god rolls in and picks up broken face, rolls out.

I say to new face of god, why give you and take away? I remember women. Why no women now?



God says, many reasons. You develop sexly more early than mindly. He says other things I not understand. I weary, and say, what is that with what I first ask, where come I from?

God nods, bends eyes down for write. Says, good, good.

I ask, why good?

He says, you return to question. You connect. What with question is you laid seed of young with women. As they made, so you made.

Where young? I ask. Where women more?

I get angry again. God is evil god. I hate god. I smash god's face again.

Iron god rolls in, out. God mends face again, says please not keep do that, think of expcense. I not understand, but understand no good smash god's faces. God as many faces as . . . as . . . as I not know. As-things, many-things, not here. No thing here, only me and god and the iron god that rolls.

No thing. No woman, I tell god I want woman again.

I think of one now. Why this one? Great arms, hairiness, little bright eyes—why this one out of forgot when all others only one bright darkness, one hurting joy? I tremble so I cannot speak. Speaking never easy. When I can speak, I say only this language not made for these lips.

God jumps, makes face, disappears. Comes back with other god. Say that again, he says. What you just said.

I say, I want woman again.

First god makes face, but face of hurt now. No, he says, what you said about language.

No, I say. I want woman.

Gods look at each other, go away, come back. God says, right if you say what you said.

I say, good. I say, this language not made for these lips.

Gods look at each other. Hear that, says first god.

Second god looks strange look. I hear quick words—long words, new words. I looking at them, listening. They turn from each other, see me, go away.

But they send in woman, with iron god that rolls.

Iron god rolls away. I look at woman. She looks at me. I speak to her. But she can speak one word, two words, no more. I feel sad. I know now I want speak, think, more than I want woman. And this not the one woman I remember. Where is that one? Who is that one?

Names. I must make names. Names more need than young. I turn away.

Woman hits me. She strong. I fall. I get up, ready hit her. But turn away. I must think.

We lie in far corners. She sleep. I that dark time think . . . think. Not now, where come I from? But, why am I here?

And where is here?

And who are the gods, the white and hairless ones?

I ask the god these things. God says, good that you ask, and bends down for write. I say, not good that you not answer. He says, in time, I say, no—now, now. I go smash god's face with fist. But this time god's face not break.

God, I think out, has made stronger face in dark time. No use smash now. Not because fist hurt, but because smash do nothing. I must learn how act. I must learn. I ask god, how learn?

He says, first words good. Then numbers.

I ask, what numbers?

He holds white hand up and says, one two three four five six seven eight nine ten. Shows me numbers. I understand. Again, he says.

No, I say, I understand. One two three four five six seven eight nine ten.

His eyes grow big. He says marvellous, but words first.

I say, words and numbers at same time.

He looks at me. Right, he says, words and numbers together.

And names, I say.

All right, he says, making happy face, and names.

Days pass. I learn words and numbers and names. Name of god is Jackson. I too need name, I tell him.

Yes, you need name, he says. We will call you—let me see—Farr. Yes, Farr. You like that name?

Farr, I say. Yes, I like that. But you give me that name. Who gave you your name?

My parents, he says. Their name was Jackson, too.

But you are not my parent, I say. Where are my parents?

That is a long story, says god Jackson. Some day I will tell you.

I say, but how does it take so long to tell where? Not how, I want to know now, only where.

They are not here any more, he says.

That I can see, I tell him shortly. Where are they?

God Jackson hesitates. They are dead, he says at last.

Dead? I say. New word.

Not living, he explains. Like floor, wall. Not able to move. No thinking power. As we all arrive.

We? I say. We is plural pronoun. Of like people together. We, you and I, are not like.

He looks sad—I begin to recognise what changes in gods' faces mean now. No, we are not like, he says softly, but we are like in many ways. And we both must die. Then he gathers his shoulders and says, but there is much to be done first.

Yes, I say, much to learn. If time is limited then I must learn more quickly. I must learn how you and I are different, why we are here, what is our purpose.

God Jackson smiles sadly. Steady boy, he says quietly.

I try to make smile face too. I want books, I say. Here, not beyond wall for you to show me, but books to read here. Many books. I smile big smile.

God looks frightened—of the expression on my face, I think. So I add, and maybe a mirror?

God laughs now. Right. Books and—he laughs again—and a mirror.

Many days pass, many nights. I learn much from books of the world of which I am a small part in a small place. Sometimes I wonder why I am in a small place. But I am too busy to let it worry me, or to worry Jackson with it.

I learn of the strange world of men. Of their greatness, their wonder, their science, their history. And, learning their names, I am curious of art, of music. I am brought pictures, music. But these things only fill me with a sense of loss. I clutch at vague feelings that they stir in me—but the feelings elude me. These works are made by something in man to which I cannot respond. Mental creation I can follow, understand, duplicate—but not this kind of creation. For these are more than of the mind; they are of the senses, too.

And my senses are not the same as a man's—I learn this. I feel that I might be able to create art, music, from my own soul—but there is no history of the music, art, of my kind. Just as, in the history I read, there is nothing of my kind. And, at last, I know that I have to know.

I ask Jackson.

He smiles sadly. Jackson, I have recognised over the years, is a man of sad smiles. "I must confer with my colleagues first," he says.

I don't understand why, but I accept. Next day he says, "Now I can tell you. But you must be prepared for a strange story."

I smile. I have long ago given up trying to smile like a man, but Jackson understands. "Nothing could be stranger than my isolation here," I say. "Tell me."

He takes a deep breath, then says, "The truth is that you are not a native of this Earth. Your forbears, several generations back, came here from another world."

My little world trembles around me. "Which world?" I ask excitedly. I have learned of the universe, the stars—that man himself has started to journey to them.

"We never knew for sure," Jackson answers, "although it was a far world, one that our own ships never reached."

"Never reached?" I exclaim, suddenly alarmed. "You say it as if any chance to reach it was in the past."

Jackson looks down at his hands, then up at me again. "That's right, I'm afraid. Your native sun was going nova. The ship that brought your forbears here was a colonising ship. All that our scientists found out about your native world was that it was a heavy planet with an atmosphere not like Earth's. It was thin, with a high ammonia content. They knew that because of the atmosphere on the ship—the gravity because of the gravity-maintaining apparatus on board.

"The ship crashed here. Your forbears were taken from the wreck, placed in cells like the one you were reared in, and tended. But they were terribly injured—none survived long. But before they died, several young were delivered. That's how it was known that it was a colonising ship, for several of the women were pregnant.

"But the trials of the journey—probably the effect of radiation—had warped the genetic line . . . terribly. Our scientists took on the task of breeding back to the original. And new generations of scientists after them."

"And how . . . how is it going?"

"At last we are very near success."

I stay looking into Jackson's eyes for a long time, without speaking. Item by item, things make sense. The isolation, because this gravity and atmosphere is not man's; the bringing and taking away of the women, for control of breeding the wheeled robots to tend us, because men have to stay outside, making themselves known only on television screens.

I begin to realise the immensity of the task that these men took on—to understand why Jackson has often looked so sad. There must have been many setbacks on the way.

At last I ask, "And am I now as my forbears were?"

"As near as we can make out. It was working in the dark, to a large extent. We don't know whether your sexual precocity was part of the original pattern or not, but—" he smiles—"it certainly helped to speed up things."

"How many of us are there now?" I ask.

"Eight. Two men and two women of your generation. Four children. And two to be born of the second generation. If they are true, then our work is done."

"And then?"

"You will be brought together. You are the most intelligent . . . by far . . . so you will be chief."

"Chief of what kingdom?" I ask, striving to keep the bitterness out of my voice. "These cells?"

"Do you think," Jackson answers, smiling, "that all this labour would have been dedicated just to that? No—soon, all being well, a ship will take you to the fourth world of Procyon. That world is capable of sustaining you and your people. You will be able to multiply, to start a whole new history."

Jackson is looking at me, as if expecting some signs of elation from me. But although my heart leaps up momentarily at his words, it is immediately filled with misgivings. There is so much to know yet. I feel a great nostalgia for a world, for a history, but also fear. I have knowledge, true, but it is all in a void . . .

That night I do not sleep. I am thinking of many things. And I am haunted by things which are not thoughts—fantasies, dreams, I don't know what to call them. I tell myself that it is only the suddenness of it all that troubles me—that, and perhaps a mourning for a world which I never knew and never will.

But something else. Something I cannot place . . . which tells me that Jackson is not telling the truth—or not all of it. I reproach myself, tell myself that my suspicion stems from a fact that is, after all, not new to me—that I am entirely dependent on what he tells me. All knowledge I have of the outside world passes through his hands to me. I tell myself that I am ungrateful to think as I am thinking—for otherwise could it be? And yet . . . I know that there is much that I do not know of man's true nature.

But neither do they know all about me. I have learned to reveal only what I wish them to know. Purely and simply in self-defence. For I am frightened sometimes by the depths of power that I feel latent in me. I feel that if I revealed all that I might be able to do, these humans would use me. And I am conscious of just how absolutely I am at their mercy.

I have realised that these men whom once I called gods are not as noble as they seem. There have been gaps in the books they have provided. My reasoning powers have filled in the gaps—not with the full flesh of actuality, but with the misty shapes of surmise. *Yet enough to know that these people would not have done all they have done for nothing.*

There is a direction in their teaching. Certain things are much more detailed than others. These things have been taught me for a purpose. In the morning, I tell myself, I will ask Jackson.

But in the morning I do not have to ask. Jackson tells me, though not straight out. He leads up to the subject.

First he says, "You understand all that I told you yesterday?" I nod, reflecting wryly that Jackson still sometimes treats me like a child.

"And that a tremendous effort was exerted to make your line true again?"

Again I nod.

Jackson clears his throat. "So you understand that we shall be glad if you will help us in return after you reach Procyon four?"

"By mining uranium for you?" I suggest.

Jackson seems taken aback, but recovers quickly. "Well, yes, that among other things."

"That is the least we can do," I assure him.

"Good," he says. "You will be given full operating instructions."

I look straight at him. "It was a very happy chance that my people should have arrived when they did. It solved a problem for you."

Jackson looks at me very strangely before he cuts off the screen.

A few days after this, Jackson tells me that the final proof has been made. The two children have been delivered and are perfect. I am given many instructions preparatory to the gathering of my people together.

But I feel heavy of heart, when I know that I should feel joyful at the prospect of liberation.

And when my people are shepherded in, I feel even more sad. Not because *she* is not there—and I realise that she must have died, perhaps (I shudder at the thought) in giving birth to a monster—but because I am still brooding on the whole project.

The dreams are still haunting me. I am summoning them, by powers for which there is no name in the books of men. I am drawing them from the far regions where they dwell. I instruct my people, but the words are Jackson's and the spirit is not mine.

When the light is turned low I lie in a state not waking, not sleeping. The dreams are very near. I will, *will* with every cell of this body and brain.

And the answer suddenly comes—out of the layers of darkness and the past. And I know what is happening. I am waking dreams from racial memory—from the store that was all but buried by what was wrought upon my forbears. But the wreaking has yielded new powers; this is one of them, the power to uncover.

I uncover.

And I tremble at what is revealed. I choke—I cannot see for the strength of the emotions that possess me. The dream passes, but I know that it was truth. For in that moment I heard music,

and the music swept through me and moved me as I re-lived the past. And it symbolises it all. For it has been lost—and everything has been lost.

I look at my people sleeping in the half-light. I feel pity. I would strangle them all as they slept if I could do that single-handed.

Instead I cannot even decide whether to waken them to tell them the truth, or to leave them in merciful ignorance.

But I know one thing—I *have to tell Jackson what I think of him and his whole filthy race.*

I tell him next morning. But I insist on being moved to another cell first. I am still undecided about my own people. *My people!* I turn sick at the grotesqueness of it all.

"I know the truth," I tell Jackson. "I know that my people did not come from another world."

In other circumstances, I could laugh at the expression that explodes in his face, the look of stupefaction. I know human expressions well by now, but I have never seen anything like this—not even on that far-off day when Jackson discovered my intelligence.

"What do you mean?" he says feebly.

"When you made us," I tell him. "you did not know what you had made, what new senses might stir in this twisted flesh."

"Make you? We did not make you."

"Well, re-make us," I say.

"But that is how I told you it was."

"True, but you told us that we were of another race. Not the truth—that *we are of man.*"

He takes hold of the frame of his chair. He looks terrible.

"It's true, isn't it," I say.

He nods. "Heaven knows how you found out—and what the executive will do to me when *they* hear of this—but, yes, that's the truth of it."

For a moment I am moved to pity by the thought of the consequences for him, but it is flooded away by the vehement thoughts that rage in my brain—and stream from my lips.

For now I tell him.

I tell him bitterly that I can't judge anyone. For I have reached maturity in a tiny cell of a world, tended by lying jailers—so what can I know truly of good and evil? What, I rave, can I know anyway, who have been deliberately *made*, my senses twisted in my

twisted body? I heard music once, and it meant nothing to me. Now again I have heard music, and it was only the shadow of music, and I heard it only with the memory of senses. But—

"You cut us off from all that—from our birthright, our history, from everything that made sense. Days and nights I was tormented by dreams of a woman. She died—but that's not the point. The point is—that I dreamed of a monster—when all along my senses told me she was beautiful. All the standards, the senses, of a man have been perverted in what you have done to us."

"But it is all relative," Jackson pleads, "don't you see that?"

"If we were natural creatures, yes," I rage back. "But would you like to be changed so that you worshipped ugliness, thought monstrosity beautiful? Oh, it was all right if that happened to us—wasn't it?—as long as your creatures could *think*. As long as they would be able to work for you. You told me that it was started as a noble work of rescue. But it was a planned campaign to serve your own ends. This I don't know for fact, as I know the rest—but it is clear enough—you needed uranium. Procyon Four has uranium. So you bred ordinary men into monsters like me that could live on that world and get the metal for you."

"For what? To run more spaceships? For the lords of creation to go even further even faster? What did a few of your fellow-men matter? What did the truth matter, when you could so easily lie to the trapped monsters of your own making?"

I laugh bitterly, and am conscious now of just how different it is from a man's laughter. It is the cry of some poor trapped beast.

"Stop! Stop!" Jackson screams. "You make it sound like something ghastly and filthy."

I have quietened down, but I am trembling.

"Everything might be forgivable," I tell him. "Everything—*except the story you told me.*" I have to fight to control my trembling, to put down the loathing that possesses me. "Because the thought that you could have made up that lie—the thought that I believed it and was grateful—makes me feel pitiful and helpless and degraded."

"But, degraded as I feel, I look down on you and your people with contempt."

Jackson has flinched before my outburst, but now he comes back. "Do you think we told you that because we wanted to? We tried to plan for when we started to breed right. Intelligence got lost near the beginning. We knew that when we recovered it, when . . . if . . . the project succeeded, we'd have a problem on our hands. We tried to put ourselves in your place, to feel how you would feel."

"And, just as important, we needed your loyalty. Don't you see—how could we have told you the truth? That was why we concocted the myth of your coming from another world. And wouldn't you have been better off believing it?"

"How can I tell now that I know?" I say bitterly.

"But you have not told your people yet."

"Of course you know that," I told him. "You know everything about us. Every minute of our lives you have spied on us."

Jackson sighs. "Is everything to be held against us now? We had to do that. We had to know your reactions, take every precaution."

"You took every precaution," I agree. "But you forgot one thing. You should have killed us before any of us could think."

He makes wild, despairing gestures with his hands. "How can I make it right with you? I'm not making excuses, but we *had* to do it. We could have sent robots to do what we wanted. That would have presented its own problems, but they could have been solved. But it isn't that. It isn't just man's greed, or his fever to go further and faster. It's something bigger than that.

"In the three centuries that man has been travelling space, he's got a foothold on just one planet—and that one is Venus, right on his own doorstep. And he's only hanging on there by the skin of his teeth. But he'll make it. He'll survive, adapt to the conditions there. Don't you see, he'll change too, just as you have changed."

"*Been* changed," I put in witheringly.

He shrugs that away. "All the other worlds discovered so far are uninhabitable for man as he is. Temperature, atmosphere, gravity—it's only within narrow limits of those that he can adapt normally. But, somehow, he has to push on. He daren't stop—or he falls back. You don't understand that yet. You will when you have a world of your own."

I jerk my head angrily. "You think I'm going there now?"

Jackson looks into my eyes. I look back—at his white hairless face, his wide eyes, his long nose that breathes an atmosphere that would be poison to me and my kind. I called myself a monster—but still I don't feel one. I still feel that *he* is the alien. But that's the crux of it—only because I am deviant.

Jackson speaks again. "Don't judge mankind too harshly. Remember those who first underwent the change, who suffered being irradiated and operated on—they were volunteers."

I stare at him. That last word is like a great hand wrenching at the structure of contempt that I have built. Then I shrug. "How easy for you to tell me one more lie."

"I will bring proof."

"Easy to manufacture proof." I tell him.

He goes away, comes back with apparatus. He sets it in motion. It is a projector.

I see a city square—and twelve statues. The camera approaches them. They are gigantic, hundreds of feet tall. I can tell from the size of the buildings, the throngs of ant-like people who stare up at the colossi, which are ranged in a great semi-circle.

And there is one huge plaque, tilted to the sky. It reads:

TO THE TWELVE WHO RISKED THEIR LIVES AND
GAVE THEIR PERPETUITY THAT MAN MIGHT
GAIN A FOOTHOLD ON THE STARS.

A.D. 2235.

Looking at that sight, I feel a fullness in my throat, a pricking at the eyes. I strive against it. "Trick photography," I say.

"You think so?" says Jackson quietly.

"No," I say. There is a long silence.

"Well?" says Jackson.

"I will go back to my people and—and make ready for the flight."

"What will you tell them?"

"The truth."

"But how do you think they will take it?"

"I don't know," I admit. Then I smile—a smile that I know is grotesque, inhuman—but I say, "Like men, I hope."

Arthur Sellings

WE CALL IT

Wherever colonists settle it eventually becomes Home—if not to the original settlers then to their children. When the star-ships travel the galaxy Home will present a variety of unexpected aspects, few of them normal by Earthly standards.

HOME

By Sydney J. Bounds

A tiny, unexpected ship fell through an arc towards this planet at the rim of the galaxy.

Commander Harrison, tall and harassed with crinkly grey hair, shaded his eyes from the glare of an alien sun and made mental calculations. Behind him, the colonists neglected their work to stare at the incredible sight.

"Five miles to the south," Harrison said, estimating where the ship would land. "I'll take two men with me—Burke and Waclov."

Both men were hunters, dressed in halter and moccasins, and each carried a long bow. Their bodies were brown and hard and they moved with an easy, loping gait. They travelled south at a speed which only a gravity less than that of Earth would allow, and they travelled in silence.

Harrison's thoughts mirrored those of the two hunters, and those of the men and women they left behind . . .

Why was this ship landing men when no contact with Earth was due for another six years? The Starships—atomic-powered and incapable of planetary landfall—travelled an endless orbit, swinging out from Earth to the very ends of the galaxy. Small spacecraft, powered by chemical rockets, were used to land settlers at their appointed destination—and the Starship continued on its way.

Ten years was the time allotted for a colony to establish itself. Ten years before a ship came from Earth to see if the colony thrived, to decide whether more settlers should be landed.

Harrison thought: We've another six years to run—and yet a ship has come. Why?

The answer lay on the far side of a wooded hill and, presently, the three men stood upon the crest, looking down at the ship. It was very small, with a cabin designed to hold one person.

Between Harrison's party and the ship was a narrow stream, the merest trickle of water. Waclov went to the edge and read sign; he sniffed the air with delicate nostrils and pointed beyond the trees.

"One of *them*," he grunted.

"All right," Harrison said, "we'll keep moving."

They crossed the stream and reached the ship. A man sat on the plastic casing of a radio-transmitter, just outside the port; he was young, blonde-haired, and dressed in a smart uniform with silver braid on his shoulders. There was a stiffness in his movement as he rose to his feet, cold calculation in his gaze.

"You alone?" Harrison asked briskly.

"Yes, I'm alone." The young man appeared startled by the brief garb of the colonists and the primitive weapons which they carried.

Harrison entered the ship and began to strip it of essentials; emergency rations, first-aid kit, dry cells. He bundled his loot together and went outside. Waclov was prowling about, sniffing the air.

"Dangerous to hang around," the hunter said. "Maybe we can return later."

Harrison glanced at the blonde young man. "Ready to leave?"

"Where's the transport?"

"You walk!"

The young man frowned.

"I'd better introduce myself—my name is Ross and I represent—"

Harrison cut in: "We're in an exposed position. Explanations can wait."

Ross pulled a gun from his pocket and hefted it in his hand.

"All right," he said, "I'll come with you—but you'll do well to treat me with respect. I'm an important person so far as you're concerned."

They moved off, and were little more than half way to the stream when Waclov stopped and strung an arrow to his bow.

"If you can use that gun," he grunted at Ross, "aim for the third eye. It's central in the head and high up."

The air filled with a sound like thunder. Trees snapped and the ground shook as the creature rushed them. It was the size of an elephant and the shape of a bison, with bony formations protruding from coarse and matted hair. Its eyes were large and angry, its horns lowered for the charge.

Ross raised his gun and fired. He had only time for one shot before he was swept aside as if by a whirlwind. The creature hurtled past in a cloud of dust, rammed a tree and toppled to the ground. It lay there, threshing and heaving, roaring mightily.

Waclov said, impressed: "That was a good shot. You have much ammunition for your gun?"

Ross picked himself up and brushed the dirt from his uniform.

"Enough to look out for myself," he answered deliberately.

"Let's cross the river," Harrison said.

The stream had deepened in the short time that had elapsed since their visit to the spaceship. The water reached to their thighs as they waded over; higher up the bank, Harrison paused and looked back.

"Only just in time," he commented.

A wall of white-flecked foam, thirty feet high, rushed headlong through the narrow gully, sweeping everything before it. Afterwards, the quiet stream was a dark and turbulent river, deep and swift-flowing.

Ross was perturbed. "A hell of a planet I seem to have picked."

"Yes," Harrison said bitterly, "a hell of a planet! I wish I had the fools here who rated it Earth-type *Plus*. The survey people didn't know their jobs—either that, or they didn't care enough about the settlers who'd follow them. It doesn't matter to them that there are natural hazards here that keep down human life to a survival level. That's something for us to worry about."

Ross smiled smugly.

"Things will be different now," he said. "Let me introduce myself. I am the official representative of the new Terran Empire."

The leaders of the old order have been overthrown. Our new leaders will ensure that no such mistake is made again—"

Harrison smiled faintly.

"Old or new . . . it won't make any difference to us!"

They reached the settlement at last. Ross saw a squat and battered cone of metal rising from the ground; the rest of the ship had long since been buried under drifting dust. Grouped about it were flimsy huts of leaves plastered to a framework of tree-stalks; some women were tending a huge clay pot suspended over an open fire, and the men built up the ring of fires around the encampment. Night settled over the planet.

Ross put down his radio-transmitter and sat on it, tired and perspiring. He felt depressed by what he saw—although he could not have said exactly what he had expected to find here, it was certainly something better than the primitive dwellings he actually saw.

A stout, bald-headed man wearing a pair of patched shorts walked up to Harrison.

"Anything for me?" he asked.

"Sure, doc," Harrison said, and handed over the first-aid kit. "How is she?"

Lawrence, the colony's medical man, opened the kit and rummaged through it. Holding up a phial, he replied:

"Maybe this will help. She's sleeping badly—recurring nightmare—dreams she's chased by a man without a face."

Harrison sighed and turned to a thin young man with cropped hair and sensitive features.

"Don't take it hard, Joe. She'll be all right."

Joe Murray forced the anxious look from his face.

"Sure, she'll be all right, Commander. I've a hunch we're going to do it this time."

Harrison said: "I hope so, Joe. I certainly hope so."

He watched Murray follow the doctor into the ship.

Ross drawled: "What was that all about?"

"His wife is expecting. It's her third try."

The colonists began to gather for their meal. Ross knew that thirty men and thirty women had landed on this planet; their numbers, he noted, were considerably reduced. More women than men had survived—and he saw no children.

Food was served in clay bowls; there weren't enough to go round, but they gave one to Ross. The stew contained meat and vegetables and smelt unpleasant. He took a mouthful and choked.

Lawrence said: "You'll get used to it—we all have. Terran plants won't thrive here, so we have to eat the native stuff to live."

Ross couldn't finish his portion.

"I'm tired," he grunted. "Show me where I sleep."

Harrison took him to one of the huts. The pile of leaves that served for a bed was inhabited by small, crawling things, and there was no door.

"Hell," Ross said in disgust.

He removed his boots and loosened his collar and lay down. It was some time before he dropped off to sleep.

He woke to warm, bright sunlight. He felt stiff and his skin itched; he scratched the red patches and cursed when he discovered his gun had vanished.

He rose and went outside. The camp was deserted except for Lawrence.

"There's cold stew in the pot," the doctor told him. "Help yourself. When you've eaten, go into the bush and collect nuts. This kind is best." He showed Ross a sample. "We need them for oil. The winter here is long and hard."

Ross ignored him. He crossed the glade and plucked a soft green fruit from a bush—but before he could taste it, Lawrence struck the thing from his hand.

"Poisonous," the doctor said briefly.

Ross swore explosively.

"What kind of a colony is this? You've had four years to get established . . . yet you live like animals! There ought to be —"

"Forget what ought to be! You're here, so you'll have to make the best of it. We've had a bad time—and those of us who still live are thankful for just that. We're not expecting anything more."

Something in the doctor's tone had a sobering effect on Ross.

"What happened to the others?" he asked.

"Oh, different things. Disease, a scratch turned septic—there are conditions here beyond medical knowledge. You've already seen one specimen of the local carnivora, so you can imagine what happens to the hunter who missed with his first arrow. Then we have 'quakes and dust-storms and tidal rivers, any of which can prove fatal. Sometimes a man just goes missing and we never find out what happened."

Ross stirred uneasily, muttering under his breath.

Lawrence continued: "Our numbers are going down—and there are no children to replace us. Babies have been born, but not one

has lived; this environment is alien and the slightest ailment can be a matter of life or death. We have developed some degree of resistance—children don't get the chance to develop it."

"The Murray woman. What's her name? She's . . ."

"Anabel," the doctor said. "Anabel Murray has lost two and expects her third any time now. We're all hoping the child will live. If so, it'll be the first."

Ross began to use his radio-transmitter.

"I'm getting out of here," he said.

He contacted the Starship and made his report. He finished up: "This planet is no good, a waste of time. Just pick me up and —"

A metallic click from the receiver told him the ship had broken contact. He sweated. Surely they wouldn't leave him here? He'd done his job—it wasn't his fault the planet was hostile . . .

Turning to Lawrence, he asked: "What do you call this place?"

"Officially, it is GX-79. We call it *Home*."

Ross accepted an offer to share a hut with one of the surplus women. Her name was Elsa and she was older than he; a dark-skinned woman with long hair and large, watchful eyes.

She watched over him, like a mother over her child.

He sat on the dirty floor of her hut, staring at the useless transmitter. He was only just getting used to the fact that he was here to stay, that the Starship had gone.

"On Earth," he said, musing aloud, "I thought nothing mattered but the Revolution. It seemed simple enough then—a clear-cut choice between the old system and the new. I was all set for a good job under the new régime."

Elsa lay back on a skin stuffed with leaves, combing her hair.

"Now you'll have to work," she told him.

Ross ignored the interruption. He stared through the opening that served for a door, to where a man sat binding a flint to a sliver of wood, and his vision blurred with memories.

"I never thought they'd desert me . . . I really believed in the Revolution, that the Leaders wanted to improve conditions for all men. I was supposed to find out if this colony would swear allegiance to the New Empire . . . now it seems the Empire isn't interested."

"Politicians are all the same," Elsa sniffed.

He glanced at the stub of comb she was using on her tangled hair.

"Back home, I'd give you a hair-dresser all to yourself."

"This is Home," Elsa returned promptly, "and the sooner you start work the better!"

But still Ross sat brooding by the fire while the men hunted and the women gathered fruit and berries. They fed him and answered when he spoke, and someone always followed him if he wandered from the enclosure; he might fall into a trap set by one of the hunters or eat from a poisoned bush. They treated him as a child who had yet to learn to fend for himself.

One night, Harrison said to him:

"Home is *dangerous*. Living in a sheltered community, you have forgotten the word can have a very real meaning. It is something you must relearn. This world has no margin of safety for the careless—a single mistake can mean death.

"When we landed here we were told our job was to survive. We had seed and tools and ten years to make good—our seed perished that first season and we are learning to make new tools. Four years have passed and we still have no more than a toe-hold.

"The ecology of Home is different from that of Earth and it is we who are alien. If we are to live off this planet, we must adapt so we fit into the balance of Nature. Perhaps we are no worse off than other star-colonies. Perhaps even luckier than some—we'll never know.

"One thing is certain. Unless we prove we can thrive here, Earth will have no use for us. It makes no difference who is in power; we shall be left to die . . . and it will be the planet that has beaten us. Do you see now why it is so important that children should be born?"

Harrison paused, looking deep into Ross's eyes.

"But you mustn't think of Home as actively hostile. We are fighting the blind forces of Nature—forces that kill without hatred or malice those who do not submit to its laws. The laws are inexorable . . . we adapt or die. That is the lesson we have to learn."

The wind rose in the west, gathered strength, and hurled itself through the valley with hurricane force. The sky grew dark under a screaming wall of knife-edged particles. There was a tearing sound and a solid barrier of darkness and no air at all to breathe—only dust to fill a man's lungs and choke the life from him.

At the first sign of rising wind, men and women left their work and raced through the settlement to the safety of the spaceship. Harrison stood immediately inside the port and checked names against a list.

Elsa said: "Ross is still outside. I think he went into the bush."

Harrison's face revealed deliberation; after the last of the stragglers had come in, he closed the port with an air of finality.

"He couldn't reach us in time," he decided.

The wind rose to new fury and hammered the walls of the ship. The men and women sheltering inside could hear its angry screaming and feel the metal shudder under the continual buffeting; they imagined the dust biting at the shell and eroding it, atom by atom. For nearly four years the ship had given them asylum—and they knew it would not last for ever.

—Elsa looked across the crowded room and saw Joe Murray beside his wife, and she thought of Ross . . .

She touched Harrison's arm, and said: "I'm going out—perhaps I can find him before it's too late."

He glanced at her and said nothing; there was nothing to say. Elsa tore a strip of cloth from the hem of her dress and held it over her face. Harrison opened the port and closed it again behind her.

Outside the ship, the wind raged and howled; it lashed her body and rent her dress; it bent her like a sapling and forced her to crawl with her face covered into the blinding blackness.

The dust chafed her skin like an abrasive and worked its way under the pad she held against her face; it got into her mouth and nostrils and left her gasping; it needled her eyes and made them water.

She let the wind guide her, for Ross was subject to the same forces; in time, it would bring her to him. She prayed she would reach him quickly. From time to time, she removed the pad from her mouth and shouted his name—the wind lifted her voice and and threw it, mocking, away.

She stumbled into him by accident. His hands seized hold of her with brutal eagerness and his voice cried out with the intensity of a lost soul.

"Elsa—you came!"

She ripped away part of his shirt, wadded and rammed it into his face.

She crawled into the wind with the certain knowledge that they could not reach the ship. There was only one chance—to find an air-pocket and stay down it till the storm blew itself out. A slender chance, but the flame of hope burnt steadily in her now that she had found her man. She would not easily give up.

The ground sloped down and the surface changed to brittle rock that crunched and splintered under her weight. A draught of cool air came from below. Her fingers clawed at the fragile shards of rock and she made a hole large enough to take a man's head. She

placed her hand behind Ross's neck and forced him, face-down, into the hole.

Below the surface, air whistled through the honeycombed rock—air to breathe, to give them life. Elsa hurriedly made a second hole and stretched out beside Ross.

They remained in this cramped position for hour after hour, chilled and half-buried by dust, while the storm blew across them with frightful violence. When, finally, the wind dropped and there was air again to breathe, both were stiff and slow to rise.

They smiled wearily at each other, sharing the knowledge that they had cheated death.

Ross took her hand, and said: "You saved my life, Elsa. If you hadn't come for me, I wouldn't have known enough to search for an air-pocket."

"On Home," she answered, "even one life is important."

They started back for the ship together, and Ross felt a new spirit struggling to life inside him.

Harrison opened the port and men began to shift the tons of dust that silted up the opening. It had all happened before and was just as he expected; the flimsy buildings had been swept away, the small animals in the food pen buried alive, their crops destroyed. They would have to start all over again.

Wearily, with infinite patience, with few tools and no resources, the men and women of Earth once more set about making this planet their own. The work went on, and it did not escape Harrison's notice that Ross picked up a shovel and joined in, although no-one ordered him to do so . . .

Anabel Murray cried out in her sleep. She woke to the warm, sweaty darkness of the night with terror in her soul.

"Joe, Joe, it's starting again! The nightmare—"

Her husband put his arms about her and comforted her.

"It's all right," he said. "I'm with you—it's all right, honey."

She buried her face in his chest and whimpered like a child.

"He was chasing me through the forest, a giant with no face, and I slipped and—"

"Hush, darling, there is no giant."

Lawrence called it unconscious symbolism. In her dreams, she gave human form to the danger hanging over the colony; and the symbol grew in size as pregnancy increased her fear. The empty face represented the blind forces of Nature.

"I'm scared, Joe," she whispered. "I've a feeling something is going to happen . . . Joe, fetch the doctor!"

The ground heaved and an angry rumbling set the air a'quiver. The horizon tilted and huge mounds of earth pushed up, blotting out the ring of fires.

"A quake!" someone shouted. "Everyone into the open!"

The noise intensified till it sounded as though giant rocks were being crushed on some titanic mill. One side of a hill with a forest of trees upon it slid downwards and vanished from sight. A man ran screaming through the dust and tumult.

Anabel Murray lay back on the shuddering ground, her hands clutching those of her husband. Sweat trickled down her cheeks and the birth pains brought a desperate cry to her lips. Joe shouted for the doctor, but could not make him hear—and he dare not leave her now.

Ross stumbled upon them out of the darkness.

"Lawrence has gone," he said grimly. "The ground opened and swallowed him like a whale taking a minnow." He dropped to his knees beside Anabel. "Let me help . . ."

The ground trembled even more violently than before and opened and closed like the mouth of some monster intent on devouring the people of Earth. A wall of solid rock rose up from the plain with a sound of rusty stage mechanism; a tree dragged its roots and toppled slowly over; clouds of yellow dust descended upon them and waves of intense heat, belched from the fiery maw of erupting volcanos, rushed through the air. The planet was torn by great rifts.

Anabel Murray made a long sigh and went limp.

The quake subsided and the land had a changed appearance. Water began to trickle through the chasms left by the upheaval. The dust settled and there followed a great calm.

Ross took the new-born infant in his arms and paced up and down, listening to its strident cry. We've won, he thought exultantly—and his face was lit by the knowledge that he had found himself—we've beaten this damned planet for always!

Through the silence of the shattered camp, a baby's lusty wailing echoed his own feeling of triumph; it was a sound that promised well for the future.

Sydney J. Bounds

Astronomers are able to give us for more accurate information about the furthestmost stars we can see than about the planets in our own Solar System. There are some new facts about Jupiter, however.

THE NEW JUPITER

By John Newman

Although a group of astronomers in this country now keep a close watch on Jupiter, and there are intermittent surges of interest when planets such as Mars and Venus swing in close to us, the planets of the Solar System have, in the recent past, proved to have little attraction for astronomers.

The planets are puny when compared with the wonders of giant stars, stellar clusters and galaxies extending over millions of light years. Astronomers are only human: they know that far more effort, often with negligible results, must be put into the study of a planet than into the analysis of a star or gas cloud blueprinting its structure with a wealth of spectral lines. So the giant instruments of astronomy were developed to study the far heavens—not our own backyard.

But during the past few years the attention of astronomers has tended to be focussed nearer the home planet, and work that has been done on the planets only goes to show that we know far less than we should about them.

Most of the "facts" quoted about the planets were deduced from a few observations on temperature, density and mass. The planets are exceedingly difficult to study: photography tends to smear out details of surface markings, and they only shine by virtue of reflected light and not with the brilliance of internal illumination. The two really bright planets—Venus and Jupiter—are enigmas because of that brilliance; their reflecting clouds advertise their presence at the same time as cutting off their surface detail. They are both bright enough to cast shadows on Earth under favourable circumstances.

Jupiter is an annoying planet to study. It has a wealth of beautiful surface markings, often more clearly seen than the dis-

puted details of Mars; but Jupiter is extremely fickle. The markings appear and disappear. They change in intensity and shades of colour fairly quickly. They vary in their speed of rotation. On Jupiter, as with Venus, we see only the top of the atmospheric sheath.

On looking at Jupiter the observer is immediately arrested by its most striking feature, the transverse belts of colour—bands of pastel-shading in yellow, brown, lavender and orange, with intervening whitish belts and areas of olive green. These colours have bemused theoretical astronomers since Galileo with his *occhiale*, or telescope as it later came to be called, and Bartoli, Grimaldi, Hook and Cassini first began to study and record what they had seen. Until recently, no really acceptable theory was advanced.

As so often happens, the latest idea is the result of an accident. A chemist at the Catholic University of Washington, D.C., spilled some liquid air on a reaction tube. There were no spectacular events, no explosions or blinding flashes of supernal brilliance—just a faint, coloured deposit on the side of the tube. But this apparently trivial occurrence gave the first clue to the cause of the coloured belts of Jupiter.

This advance came from a seemingly completely unrelated field of science, that of free radical mechanisms. Probably astronomy was the last thing chemists in that laboratory were thinking of; but one of them saw the link, so far removed from the usual applications of free radicals, oil-cracking processes in the petroleum industry.

The background of information against which this new discovery was set was surprisingly circumstantial. Jupiter, fifth planet out from the Sun, is the frozen giant of the Solar System, being 320 times as massive as Earth and having a surface temperature of -171 degrees Centigrade. Its orbit is between the asteroid belt and the orbit of Saturn and it takes twelve years to circle the sun, spinning on its axis once every 9 hours 55 minutes.

Because of its mass it has a deep atmosphere and only during the last couple of years has this been definitely analysed as being composed mainly of hydrogen, unable to escape because of the intense gravitational field. Jupiter's escape velocity is 37 m.p.s. against the 7 m.p.s. of Earth.

Even at the beginning of this century, well-informed astronomers believed Jupiter was a miniature sun, but this idea slowly faded out and was completely killed when, in 1925, measurements of Jupiter's radiations showed its surface was little warmer than liquid

oxygen. Seven years after that, spectroscopic analysis showed the presence of methane and ammonia in the atmosphere; but in 1952 it was found that the atmosphere was mainly hydrogen and helium, with only traces of methane and ammonia. Indeed, with an average density only 1.35 times that of water, compared with Earth's density of 5.5, modern theory holds that most of Jupiter is hydrogen.

A British scientist, Professor W. H. Ramsay of Manchester University, has co-ordinated astronomical data with the theoretical high pressure physics of hydrogen to build a picture of the internal structure of Jupiter. By using mainly hydrogen as his building material, he calculated that under the gaseous atmosphere lies solid hydrogen with a density, small at first, increasing with depth and pressure.

This pressure build-up is rapid. Two thousand miles deep into Jupiter's 45,000 mile radius the pressure is 200,000 atmospheres. At 5,000 miles below the pressure rises to 800,000 atmospheres and at this point the hydrogen changes to a very much denser metallic form, an allotrope of hydrogen with a different crystalline structure which is more compressible.

Above this solid surface, however, the atmosphere of the giant planet must be an inconceivable maelstrom of thousand mile per hour storms, stupendous winds tossing clouds hundreds of miles high, gales and tornadoes generated by the rapid changes in temperature during the five-hour days and nights boosted by the phenomenal heat exchange characteristics of hydrogen gas.

The Romans knew Jupiter as the sky god, aptly connecting him with lightning strokes—aptly because even up to 576 million miles away we are able to pick up radio waves generated by lightning strokes flashing in his turbulent atmosphere. Thunder there must roll in continuous barrages over the barren surface and gales forever sweep clouds of coloured dust around the globe.

The face of Jupiter shows traces of the unrest beneath.

Adjacent cloud belts sometimes vary as much as 200 m.p.h. in speed. There is some similarity with the wind belts of Earth, if these were more neatly delineated by clouds, as they would be seen from space. But the clouds of Jupiter are many-hued, changing colour in step with the position of the planet with respect to the Sun. The atmosphere of Jupiter is under extreme conditions of cold and pressure—conditions about which we know little, and that mainly from theoretical considerations. The change in coloration is probably due to a temperature or radiation effect;

but many weird and wonderful chemical combinations have been suggested to explain the colours.

Liquid ammonia combines with the extremely reactive metal sodium to give a blue-coloured solid, the colour varying with the temperature. Although this explains the blue colour, it does not explain how free sodium could happen to exist on Jupiter. And the red colour might be caused by the irradiation of methane with intense ultraviolet light to split and reform it as cuprene—a condensed form of acetylene gas.

Now, Francis Rice has suggested that the coloured materials are free radicals, molecules so reactive that they usually exist for only a fraction of a second on the Earth's surface. On Jupiter, however, they are swept down and frozen before they can react and, throughout millions of years, have accumulated in the lower depths. From there they are lifted into the upper atmosphere by the immense gales and cyclones.

Free radicals are produced by the smashing of molecules by means of intense heat—the usual laboratory method—or ultraviolet light, plenty of which is absorbed at the top of Jupiter's atmosphere.

Starting with methane CH_4 and ammonia NH_3 , hydrogen atoms can be knocked off to give CH_3 and NH_2 radicals, electrically neutral but chemically reactive. Further splitting gives CH_2 and NH radicals.

NH can be condensed out by cooling with liquid air to give a superb blue solid, whilst a similar radical, NH_2NH gives a brilliant yellow solid on freezing.

Like other theories, this one must and is being tested by manufacturing an artificial mixture similar to Jupiter's atmosphere and exposing it in a tube to ultraviolet light whilst part of the tube is cooled with liquid air. One line of enquiry could lead to an explanation of the famous Red Spot. Just as free radicals are strongly attracted by magnetic poles so could a surface effect due to a magnetic field extending up through the surface concentrate free radicals, as iron filings are attracted by the poles of a magnet.

If this new theory of free radicals is proven it means we have a new, natural source of energy for rockets. The energy stored in radicals of the NH_2NH type is released on warming and they can be burned with oxygen in the same way as hydrazine NH_2NH_2 is now used as a rocket fuel. There are many difficulties to be overcome, but this prize is well worth grasping.

With a series of natural satellites circling Jupiter to act as space-stations, a natural store of rocket fuel will make Jupiter the most important stage on the journey to the outer planets.

John Newman

TOURIST

Several distinct groups of aliens are now mixed up in the plot to force the Earth nations into war amongst themselves. To gain the longevity treatment certain types of Earthmen have obviously joined the ranks of the 'Agency.' Despite all this, Hedley, Lockhart, Keeler and the other investigators are in for more shocks and surprises as the plot unfolds.

PLANET

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Part Two of Three Parts.

FOREWORD

Following a quiet period of political friendship between the nations of the world, tension begins to build towards a threat of war and Secret Service departments are kept busy investigating various problems that could lead to the final atomic blow-up.

In Paris, Hedley, a prominent British agent, conscripts Dr. Lockhart, a practising physician and war-time friend, into assisting him to watch an old man sitting in a café on the Boulevard Saint-Michel. Records have shown that scores of elderly men in various cities have suddenly committed suicide by poisoning and that no trace of the origin of these "dying grandfathers" had ever been found. It was thought that they might be agents of a certain power conditioned in some manner to spread virulent diseases at the time of their deaths.



As Lockhart and Hedley watch, an attractive girl accompanied by a man approach the old man and speak to him and soon after they have left he suddenly collapses. They rush to his assistance and Lockhart manages to dislodge a small capsule from his mouth but it is obvious that he will die. Administering some pentothal Lockhart questions him while Hedley records the conversation on a pocket tape recorder. The man talks in gibberish but two words are repeated several times—"Hargon" and "Villim."

Lockhart and Hedley accompany the old man's body to Saint Armande's, a military hospital, where that evening the former performs an autopsy and discovers that although the body is harmless there are some curious aspects about it—almost as though the man had been a mutation from the normal breed. Also that both tissue and functioning organs were in an advanced state of decomposition—as if death had struck simultaneously at all parts instead of one vital spot. While he is discussing this with Gates, one of Hedley's men, a violent explosion takes place in the nearby mortuary where the corpse lies and in moments the building is a raging inferno.

In hurrying to the scene Gates is shot and killed by an intruder who mistook him for Lockhart. Realising that he is now a marked man Lockhart panics and hides out in an obscure hotel. It is several days before Hedley traces him and informs him that officially he died in the fire, the authorities mistaking Gates's body for the doctor's. Since that time everything connected with the "dying grandfathers" had been hushed up and the investigation apparently closed. Although he is supposed to drop the case, Hedley has decided that he and his men will continue with it for the time being. They add Professor Brian, a noted etymologist, to their team.

Brian, after listening to the tape recording of the old man's dying words, eventually decides that the language cannot be of Earth origin. The group are forced to the conclusion, fantastic as it seems, that the old men are extra-terrestrials!

Carson, another of Hedley's men, traces the couple who spoke to the old man on the Boulevard Saint-Michel. They are a brother and sister named Kelly, tourists from Belfast, Ireland, where they had returned the day after the fire at Saint Armande's. Hedley moves his entire group to Belfast and a few days later together with Lockhart and Brian he checks with the Cook's Tourist Agency from whom the Kellys obtained their tickets. Both are well-known to the agency, being regular travellers to many parts of Europe.

While Hedley and Brian are in the manager's office, Lockhart sees Miss Kelly enter the agency and in desperation to keep her there until the others come out goes up to her and says "Hargon is dead!"

The girl's reaction is one of shock and panic and she talks rapidly in the same unknown language used by the old man. Telling her to speak English Lockhart manages to obtain some information from her but is suddenly attacked by her "brother" using a sword-stick. Wounded in the shoulder, Lockhart is only saved from death by the intervention of Brian. In the ensuing tussle the Kellys make their escape, but not before Brian has recognised the male Kelly's stilted English as that of an 18th-century dialect! What is more he apparently resided there recently as his accent showed none of the dilution of colloquialism evident in later periods. Hedley and his group are now faced with several problems—did the old men come from the stars, the future, or the past—and, of course, why were they on Earth?

VIII

There seemed to be three distinct groups of aliens now. First came the old men, harmless and fanatically uncommunicative, whose behaviour had first aroused the department's suspicions. There was the group who had been responsible for the St. Armande's fire, and which almost certainly contained a large number of Earthmen. A third group—possibly of only a few individuals—were opposed to the war-breeding activities of the second group, and they disapproved of their treatment of the old men, who were group One. And just to tangle the problem further, there was a time-travelling Eartman from two hundred years in the past.

The problem was giving Lockhart a splitting headache to add to the trouble his shoulder was giving him. The wound was superficial—a small, neat puncture which had gone through the deltoid muscle without touching the bone, and made by an instrument of razor sharpness and nearly aseptically clean. Penicillin dressings and a firm bandage would have it as good as new in a week, but the constant jogging and swaying motion of their speeding car was not helping towards a pain-free recovery. The eye which Lockhart turned on the scenic grandeur all around him was, as a result of this, decidedly jaundiced.

Hugging the restless edge of the sea, the Antrim Coast Road wound beneath soaring limestone cliffs and around grey, foam-

flecked headlands, and tiny bays where the sea was like blue glass, the sand glared yellow and the crying sea-birds were straight from a Vernon Ward painting. It passed through a small village, where thatched cottages and Neon-trimmed shop-fronts glared at each other across its tarmac no-man's land, and then on.

Their objective was Portballintrae.

Hedley had intended going to Portballintrae since the moment he found out "Miss Kelly's" address from Cook's; she lived there. But when he had picked up the letter from Draper in London at the Poste Restante the visit became a five-star crash priority.

Draper had reported the department free of alien influence—its organisational tree was such an impenetrable tangle that it was impossible for any small group to gain effective control of it. He had added that the department approved of Hedley's recent actions, and that his orders to return had been an attempt by them to extricate him from what looked to be a very sticky situation. That and to inform him of the latest developments in the investigation. This information, in the form of a photograph, a dossier, and a copy of an FBI field office report, had been enclosed for his attention.

The copy report—stamped MOST SECRET in red—concerned three old men who had killed themselves while with a party touring Yellowstone National Park. The circumstances, not to mention the poison used, had been of a very disquieting nature, though the old men themselves had seemed harmless. By backtracking their movements prior to the triple suicide—no easy job this, despite the resources of the Bureau—they had been traced to a hotel in a small Irish coastal town, where the trail had come to a dead end. An Agent who had been holidaying in Ireland—see attached photograph and dossier—was at present in residence at this hotel.

The FBI man was called Keeler. He was staying in a place called "The Bay Hotel," Portballintrae . . .

"Navigator to Pilot," Fox sing-songed to Hedley behind the wheel. "We're here."

Lockhart's mind returned to present time with a rush as the car slowed, then turned into a private parking area and stopped. It was the biggest car that they had been able to obtain at short notice—it held six people uncomfortably. It was a relief to get out of the thing.

The Bay Hotel was a sprawling, three-storey building set on the main road and overlooking the small harbour of Portballintrae, and it boasted a large private lawn and an enclosed car-park. It looked

prosperous, in a quiet sort of way, and completely ordinary. But, Lockhart reminded himself, Miss Kelly lived somewhere nearby, and this hotel was the earliest known place of origin of three old men whose deaths had the United States Federal authorities in a condition—judging by that report—of extreme anxiety. Appearances were deceptive.

There was nothing extraordinary about the reception clerk either. When Hedley hinted that his party might stay for a few days if they liked the place, Lockhart thought that his manner grew perceptibly less warm, but it could very well have been his imagination. The porter who showed them to their rooms was similarly unremarkable. If the hotel was a cloak for any kind of alien activity, then it was hiding it in the best possible way—by being outwardly *and* inwardly just an ordinary hotel.

Lockhart, his mind only on the thought of supper—or whatever meal the hotel could provide at eight-thirty in the evening—was leaving his room when the purpose of their coming here was abruptly brought back to him.

He saw the time-traveller.

It was only a glimpse through an opening door some ten yards along the corridor, but identification was positive. And the speed with which the door closed again told Lockhart that the other had seen him. Lockhart flung open the door of the room belonging to Hedley and the Professor, yelled "Come on!" and broke into a run down the corridor.

He burst through the door as the time-traveller was trying to lock it, sending the slight figure stumbling back into the room. Lockhart followed him up, swinging a vicious right. It connected high on the other's cheek, spinning him half around and throwing him against a wardrobe. He moaned faintly and slid to his knees, his hand groping towards the breast pocket of his jacket. Lockhart grabbed at the wrist, put his knee behind the elbow joint and pulled the arm back until a shiny, metallic something thudded onto the carpet.

It resembled a revolver, but more streamlined, and the barrel was solid except for a tiny pin-hole at the business end. Probably it was twin to the weapon which had gone *phht* and shot a poisoned needle into Gates in Paris. Lockhart hit him again.

"Doctor," Hedley said mildly from the doorway, "we want him to be able to talk. Don't make work for yourself."

Lockhart straightened up. He had been mad for the last few minutes, homicidally insane. He wasn't the type who charged blindly into bedrooms and beat their opponents into insensibility

—especially when he could very easily have been killed doing it. He looked at the weapon on the floor and shuddered. But he had wanted to get his hands on this murderous little so-and-so since that morning in Cook's. The shameful memory of how he had let himself be wounded and then just stood watching while the Professor kept him from being killed had not helped his anger, and the jogging his shoulder had taken in the car had him on the point of picking a quarrel with the Professor several times. Lockhart had been a tightly-wound spring, and at sight of the time-travelling Mr. Kelly he had gone *snap!*

But he was not proud of himself over it.

"I hope you haven't broken his jaw," Hedley said worriedly.

Lockhart bent down again. He ran exploring fingers along the lower jaw, glanced inside the mouth at the even rows of teeth and said shortly, "He's all right. He'll come round in a few minutes."

His shoulder was throbbing painfully—due, no doubt, to his recent violent exercise. It got worse as he lifted the unconscious figure onto the bed. But some masochistic urge, some obscure need to punish himself for his brief lapse into savagery kept him from asking one of the others to do it.

Everybody was in the room now, gazing curiously at the man on the bed. Hedley gave curt, low-voiced orders, and Simpson left to keep watch in the corridor while Fox went to seek out the FBI man, Keeler. The agent gave Lockhart a peculiar look and said, "Perhaps you'd better go to the other side of the bed, Doctor. There's a possibility that he may side with us, but if he wakes up and sees you . . ." He left the sentence hanging, shook his head, and muttered, "Caveman Lockhart." Both he and the Professor moved nearer to the bed.

It was a most unusual interrogation, and conducted with such extreme and flowery courtesy that the initial introductions and exchanges of compliments took all of fifteen minutes. He was the Honorable Cedric—plus six or seven other christian names—Bowen-Walsmley, and he was obviously pleased that the Professor was able to converse with him in his own brand of English. Some of the conversation made Lockhart smile, especially when Cedric referred to Hedley as a Bow Street Runner. But when he began to describe the work of something called the "Agency" on Earth, there was nothing funny about it at all.

Apparently the Earth-human employees of this Agency were ignorant of its true plans. There were several hundreds of them occupying positions of importance in most of the world's governments, but they worked only for the promise of continual rejuvena-

tion—it had been demonstrated several times on the older employees—and the power and riches which longevity would bring. Usually it was very dirty work indeed. The coming war was a sample.

"But *why?*" Hedley burst out suddenly. "Why are they doing it to us?"

To understand that, Cedric told him haltingly, he would have to know of the peculiar nature of the civilisation which was spread over some two hundred-odd inhabited planets of their Galaxy. It was, Lockhart gathered, a civilisation that held such a horror of physical pain that a Galactic citizen would prefer to die painlessly rather than suffer a cut finger. That was an exaggeration, but not a big one. To him life was not worth going through suffering to maintain. It was a civilisation that was going steadily mad with boredom.

And to understand *that* a knowledge of the method by which certain types of suns gave birth to planets was necessary. Cedric did not even try to describe this method—it was impossible, Lockhart guessed, in Olde English. He simply described the planets so formed.

There was a stage in the evolution of a certain type of sun when it produced planets, one of which was invariably suited to human life. But there was a dreary sameness about the planets thus produced. They lacked the axial tilt which gives seasonal changes, and their cooling was so gradual that the mountain chains which did form were neither spectacular nor capable of affecting their weather to any extent. They were temperate in climate, and because there had been no geological catastrophes to force evolutionary adaptation, their flora, fauna and general aspect was achingly dull and monotonous.

Yet over the centuries the inhabitants of these planets had developed civilisation, and a science which enabled them to travel between the stars. But they were unstable and emotionally starved cultures for the most part, and when interstellar exploration brought home the bitter fact that *all* the inhabited planets were carbon copies of the home world, that the far-off fields were as drab and uninspiring as those beneath their feet, the cultures in question took a decidedly psychotic turn.

Cedric did not use phrases like "Evolutionary adaptation" or "geological catastrophe." Lockhart was forced to condense the other's archaic expressions into sentences which he could understand himself.

Interstellar travel had accomplished one thing, however, and that was a galaxy-wide Federation of human-inhabited planets. There were very few non-human intelligent races. And not all the citizens of this Federation were unstable. There were the administrators—wise and intensely altruistic men of varying capabilities whose unremitting efforts kept the loosely-bound Federation from tearing itself apart—and the higher officers of the Agency who were stable but very definitely not sane.

The proof of their insanity was in the Agency's plans for the future of Earth.

The planet Earth was unique, a world of beauty and contrasts and change that made it the tourist's paradise of the Galaxy. Its only drawback was the fact that it was inhabited, and previous attempts by the Agency to keep these inhabitants from developing a high-level civilisation of their own had only served to accelerate the growth of the physical sciences. This forced the Agency to limit the number of tourists it transported to Earth, because an increase in the speed of communication meant greater danger of its existence being discovered. Such a state of affairs was intolerable, so the Agency had decided that the present technological culture on Earth would have to be wiped out together with enough of its population to ensure that it could never rise again. The method to be used was war, a planet-wide atomic war.

"The old men are tourists, then," Hedley said grimly. "conditioned to kill themselves rather than give away the Agency. But why are they all *old* men?"

Lockhart cut in just as Cedric was beginning to reply. He felt that Hedley and the Professor were being too gullible; it seemed to be an understood thing that this transplanted dandy from the Eighteenth Century was on their side, and that he was telling the truth. Cedric could instead be stalling for time until help in some form arrived. He said, "What I want to know is how time-travel comes into this. And also, how do you know so much about the secret aims of this Agency?"

Cedric, who had raised himself to a sitting position on the edge of the bed by this time, twisted around in surprise. He had not been aware of a fourth party in the room. When he saw Lockhart his teeth came together with a click. A slender white hand went up to the raw patch on his cheek and his features stiffened with the tension of anger. He got slowly to his feet, turned to face Lockhart, then made a sweeping and graceful bow from the waist. He smiled then, but only with his mouth.

Suddenly the Professor, his face white and actually beaded with sweat, was between them.

"You would have to shoot off your big mouth!" he whispered fiercely. "Dammit, why couldn't you . . ." He broke off, grimaced and said softly, but with great emphasis, "Be careful what you say now. *Very* careful. Unless you've been holding out on us and are an expert swordsman."

IX

It was the Professor, talking with speed and great eloquence, who got him out of it. Lockhart realised suddenly that where Hedley was concerned, Cedric might now be the more valuable man of the two—though he doubted if the agent would allow the thing to reach the pistols-for-two-coffee-for-one stage. At least, he hoped not.

The way Professor Brian put it: it had all been a most deplorable misunderstanding. In ignorance, they had acted toward each other as enemies, but now they were allies. They should also be friends. The good Doctor's questions, the Professor assured Cedric, had not been meant as a slight upon his veracity, their wording had merely been ill-chosen because of Lockhart's understandable curiosity. Blood had, after all, been spilled on both sides, and the Professor was sure that no further satisfaction would be required from either gentleman.

Lockhart, thinking of his throbbing shoulder and measuring it against the quarter inch nick which his signet ring had made in Cedric's cheek, decided that he had the biggest grievance, but he didn't bring up the point. Instead he gave an awkward imitation of Cedric's grandiloquent bow and flourish and forced his mouth into what he hoped was a smile.

Cedric returned the bow, his smile also a trifle forced. Technically, they were friends, but the atmosphere was still rather strained in the room. Lockhart was glad when he saw Hedley motioning him to the door.

"What does he mean 'allies'?" Lockhart burst out when they were in the corridor. "You're taking everything he says for gospel. Why, he hasn't even mentioned the girl. And he still hasn't answered my questions—"

"Doctor," Hedley interrupted gently, "he hasn't had *time* to answer half the questions I want to ask him yet. Personally, I believe him. His story so far is self-consistent and fits the facts as we know them. However, I make a point of not trusting anyone's

feelings in cases like this, not even my own, that is why I want you to question the Kelly girl right away. We'll be able to check his story that way."

"But . . ." Lockhart began. Things were happening too fast for him. And the last time he had met the girl . . .

"Fox will go with you, just in case there's another bodyguard," the agent went on. "But you had better handle the questioning, it would take too long to bring Fox up to date. Don't worry, you'll make out all right, Doctor." He turned and spoke to Simpson who was a few yards further down the corridor. "Has Fox come back yet?"

Simpson grinned broadly, as if at some secret joke. "He's just gone into his room."

Fox was standing in the middle of his room. There was a wide, dark stain on the breast of his well-fitting fawn suit and he was dabbing at his right ear with a towel. He looked annoyed.

Hedley indicated the stain. "How—" he began.

"Routine, just routine," Fox mimicked savagely. "I got shot with a ray-gun. Dammit, why didn't they tell us the whole family was here . . . ?"

"What family?" Hedley said impatiently.

"Keeler's. His wife and kid are with him," Fox answered, glowering. "That kid! If you imagine a little brat who stands in front of a radio, yelling the answers before the panel can deal with them—he's an ex-quiz-kid, apparently—while watering everybody in sight with that two-hundred shot space-blaster of his . . ."

"They did say he was holidaying. But that's unimportant. Does he know anything that we don't?"

Fox shook his head. The FBI man had good descriptions of the three Yellowstone suicides. Cautious questioning of one of the maids had elicited the fact that they had arrived at the Bay Hotel suddenly about ten months ago, but she had insisted that the men could not be as old as Keeler described them. Keeler had then shown her the photograph his Chief had sent, head and shoulder shots of the men taken after their death, and touched up a bit. She was still sure that they were the same men, she had told him, but the photographs made them look very much older.

The reception clerk and manager of the hotel could not tell him where the three had come from previous to their arrival there. Since asking those questions, certain small but irritating incidents had occurred which, had he been an ordinary guest, would have caused him to leave the hotel.

" . . . And just one other thing," Fox concluded. "Keeler says that there is a funny-queer character who seems to work here who answers the description of our Mr. Kelly—takes snuff and is a peculiar dresser among other things—and he sometimes meets a girl in the village who could be the Miss Kelly that we're looking for. That's about all."

Lockhart only half heard Fox's closing sentences. He was wondering about the sudden ageing of those three men. What did it mean? Longevity; accelerated ageing. He gave up.

Hedley's mind must have been working along the same lines. He said suddenly, "Doctor! Go see Miss Kelly, you know the address. Tell Fox what's been happening on the way." To Fox he said, "I'll see Keeler later. Go with the Doc. Move!"

He turned quickly and re-entered Cedric's bedroom; there were a lot more questions needing answers now.

On the way out they took a wrong turning and found themselves in a big, heavily-carpeted lounge. There was a plentiful scattering of easy chairs, most of which were occupied. As his eyes travelled round the room Lockhart was reminded outrageously of a cartoon he had seen where a member of a select London club had passed away behind his copy of *The Times*, without anyone noticing the fact for weeks.

The occupants were all old men. Some were reading papers, but mainly they just sat staring, heavy-eyed with the fatigue of extreme old age, at the sunset which poured a flood of amber light through the big french windows. Suddenly Lockhart remembered that other sunset in Paris, and the old, old man who had died watching it. Involuntarily he shivered as he turned about.

They noticed a little plaque marked "Adult's Lounge" on the door as they left. Fox, in an awed whisper, said, "Just how adult can you get!"

The girl was living in a place called Daly's Guest House, a small hotel set on the sea-front. Its manageress told Lockhart that she thought that Miss Kelly was in, and would he mind waiting in the lounge. Lockhart did not mind at all; he hadn't an idea of how to conduct the coming interview and the prospect was making him feel shaky about the knees. A chance to sit down was just what he needed.

This lounge also looked out across the bay. The sunset was dying a glorious death, and far out to sea the smoke of a coastal collier scrawled a black crayon line across the horizon, accentuating rather than spoiling its beauty. Just across the road a shadowy figure was leaning against the sea-wall, smoking. Fox was on station. But

Lockhart knew somehow that he would not be needing help this time.

It was growing dark in the room. Lockhart had just switched on a table-lamp when the girl arrived.

Looking at her Lockhart now wondered if she really was a girl in her late twenties or, distasteful as the thought was, did she possess a rejuvenated body which had lived through several normal life-times. He could not decide. She seemed surprised to see him, but not afraid, and he saw her eyes go to the small tear in the shoulder of his jacket. She spoke first.

"I'm glad Cedric did not kill you this morning," she began, and stopped. There was a brief pause, then she went on hurriedly, "The fact that there are Earth-humans with knowledge of the Agency's crimes on this planet means that evidence of inhuman practice can be brought against them, and makes possible a plan I have which will destroy them. It should also stop the coming war, providing we can act quickly—"

"Just a minute," Lockhart said sharply. "Before we talk about plans, or anything else likely to add to the general confusion, there are some questions I want answered. And," he added suspiciously, "it seems to me that if you had a plan to stop this war, you would have told us before now."

"You wouldn't have believed me. Admit it. You had to find out a little about the conspiracy first."

That was probably true, Lockhart thought to himself. But he was not going to be side-tracked. He said, "Who are you, and why are you here?"

"I am an agent of the Galactic Federation," she replied, her back stiffening perceptibly, "with instructions from Harlnida to obtain evidence that the Agency is guilty of illegal contact, exploitation and inhuman practices . . ."

Lockhart was thinking of the girl at the concert in Paris who had shown the emotional reactions of a hyper-sensitive adolescent. She probably swooned in front of crooners, too. His thoughts must have shown on his face, because an angry edge came into her voice.

" . . . Widespread inhuman practices," she went on, "because Galactic citizens as well as Earth-humans are being affected."

"You'll have to explain," Lockhart said firmly.

She did explain. Much of it was a repetition of what he had already learned from Cedric, but told from the Galactic viewpoint. The rest of it . . .

The Federation was not entirely composed of neurotics—and the richer neurotics who could afford to travel. There were strong-minded beings also, men of sensitivity and imagination who usually

attained to the higher administrative positions in the government, and spent their long lives in trying to bring new life and purpose to that mighty but decaying civilisation. But this sensitivity was also their weakness, for it made them particularly susceptible to the attractions of Earth. Over the years the Agency had been gradually stripping the Galaxy of its more mature and stable minds, luring them to Earth, and oblivion. It was a one-way trip, of course.

Lockhart said, "Luring them, how?"

With music and pictures, the girl explained. Music that ripped and bludgeoned at the emotions until the hearer all too often passed from ecstasy into permanent insanity, and pictures which were nothing less than a glimpse of Heaven. The Agency offered—for a fantastically high price—to transport tourists to the planets where these music tapes and pictures originated. The location of Earth was a closely-guarded secret, and the trip was strictly a one-way affair, but this did not matter. Nobody in their right mind would refuse a one-way trip to Heaven.

But when these tourists—they had to be among the richest and most powerful men in the Galaxy to afford it—arrived they soon discovered that their enjoyment would be short-lived. The Agency would not allow them to continue with longevity treatments, and it forced them to undergo a process of mental conditioning which caused them to kill themselves rather than give the smallest hint of their identity to an Earth-human. The Agency had become something more than a profitable transport business. It was choosing the Earth tourists with great care and for a purpose.

When the Galactic administration was sufficiently weakened, the Agency would take control of the Federation.

But recently the Agency had been in danger of losing this ultra-profitable tourist trap, the girl went on. And its long-term plan had been jeopardised at the same time. Attempts to keep Earth simple and unspoiled had back-fired. Instead of keeping the natives backward, divided among themselves and almost constantly at war, the Agency's meddling had started them thinking in terms of world government, as well as causing their technology to leap ahead until it equalled that possessed by many of the Federation worlds.

The coming war would solve this problem, though it would mean that there would be no further musical compositions coming from Earth. There would be no Earth-people.

Lockhart said, "There's one more question," and wet his lips nervously. It wasn't that he disbelieved her now, his trouble was

that his mind balked at accepting such a load of data all at once. "Time-travel," he jerked out. "What about Cedric?"

The girl looked faintly impatient. "Your Earth mathematicians know of the time-contraction effects encountered in a body travelling at light-speed," she replied. "Cedric was thrown from his horse when it was frightened by the landing of a *Grosni* ship. It brought him aboard while he was unconscious, but unaware of the extent of his injuries and feeling responsible for them, it took him to the nearest Human inhabited planet to receive treatment. Cedric regained complete consciousness only after a few weeks had passed, and had to be given extensive hypno-therapy to make his surroundings liveable for him. It was this prior conditioning which allowed him to shake off the later Agency processing given when they put him in joint charge of the base here in Portballintrae.

"The *Grosni*—whose physiology does not allow them to travel in hyperspace—had handed him over to the Agency for transportation back to Earth. But the distance from Earth to the planet where Cedric was landed was great, and though only a few months subjective time had elapsed for him, many years had gone by on Earth. When they returned him he was confused and frightened by the time-jump. They offered him what would have been a harmless job, if the *Grosni* conditioning had not counteracted their own—which was meant, of course, to make his work for the Agency appear harmless even to himself."

So the time-travel question worrying everybody had turned out to be simply a by-product of inefficient space-travel. That was a relief, anyway. But something else was bothering Lockhart now. The girl had spoken of the Agency trying to keep the Earth people at war among themselves. He said:

"Then the Agency is responsible for all our wars?"

"Certainly not," the girl replied, scornfully. "You are not as civilised as all that. World War Two, yes—you will know of national leaders, no doubt, who had delusions of being God, of living forever? But the first World War was all your own, though I think . . ." her tone softened a little, ". . . that it would have been the last if you had been left alone."

All at once Lockhart felt very small and ashamed of himself. To this girl, citizen of a galactic civilisation that stretched back for countless thousands of years, he must appear little more than a savage. She looked young, but with the advanced medical science which must be part of her culture, she could very well be hundreds of years old.

And Lockhart had almost laughed when she told him that she was a Galactic Agent.

"This plan I spoke of . . ." began Miss Kelly.

X

Hedley was sitting on a linen-chest with Keeler's portable typewriter balanced on his knees, transposing the notes he had taken earlier. It was shortly after midday, and the agent had spent the greater part of the morning listening to Miss Kelly's plan for saving the world. Now he was waiting for Fox—who had taken the car to meet the Portrush train—to return with Draper. When everyone was present, Hedley would assign duties.

Lockhart, who had heard the plan from Miss Kelly the previous night, did not feel very enthusiastic about it. A group of repertory actors, with their ability to memorise lines quickly, would be better qualified to carry it out than Hedley's group, he thought. Suddenly the agent looked across at him, and spoke.

"Out of deference to the FBI," he said drily, "I think I'll include the Bill of Rights and the Gettysburg Address." His fingers tapped busily for a few seconds, then stopped as a double knock sounded on the door.

Hedley put the machine aside as Fox and Draper came in. Quickly he introduced Draper to the FBI man. Keeler was a big, lanky individual, deeply tanned, and with the wide-set eyes and facial bone formation that suggested Indian blood. The FBI man had time only for a brief shake hands before Hedley was calling for quiet and attention. The briefing was about to begin.

"Fox has brought Draper up to date on the way here," Hedley began briskly, "so we'll get on with it.

"You must understand that the best way to stop the coming war quickly is by acting directly against the Agency. It is the *only* way, in fact. We can do this, Miss Kelly assures me, by furnishing proof of the Agency's dirty work to the Galactic Court. She also suggests that we show evidence to prove that the Earth is a civilised planet which is worth saving. That is why I want to include excerpts from the works of various philosophers, musicians, statesmen and so on.

"But this evidence," he went on, "must be read aloud before a device which both records the words and certifies that the man speaking them is telling the truth. You see, documentary evidence can be forged, so the Court doesn't accept it. The proof which we place before it must, Miss Kelly states, be—er—'keyed' to a living person."

As Hedley paused, Lockhart saw the attentive expressions around the room change slowly to dazed incredulity. They had been expecting something drastic, but *this* . . . !

"We haven't much time," the agent continued quickly, "so I suggest we start at once. The library in Portrush will supply the data we need. Draper and myself will work on past and present crimes of the Agency, Simpson and Fox will begin memorising..."

"Wait a minute," Fox said, his voice squeaking in disbelief. "Does this mean that all we have to do is read history and stuff into this . . . this gadget?"

"This 'gadget'," Hedley replied quietly, "is built into the Agency ship which will arrive two days from now. The plan calls for us boarding it to say our piece, so the job won't be all that easy."

"Oh," said Fox. Around the room there was a sudden perking up of interest.

"To further complicate matters, the ship will be totally invisible to normal vision. So will the 'tourists' landing from it. But this is to our advantage rather than otherwise, as I'll explain later. Right now we have some hard stewing to do. You'll work a lot harder than you ever did in school, believe me.

"The Professor and Keeler here will not have to memorise anything, as they will not be in the boarding party. But they can help in laying out assignments and so on." Hedley paused, smiling faintly. The 'Why not's?' of the two men came as a perfect duet.

"Because," he went on, "Keeler has a family and the Professor is too old. That," he said hastily as the etymologist showed signs of imminent eruption, "is Miss Kelly's decision, not mine. Myself, I'd say it was very thoughtful of her."

The Professor subsided into his chair, only slightly mollified. "She will be supervising our—er—studies, of course?" His face wore a "Just you wait" expression. Too old, indeed!

"Well, no," Hedley replied uncomfortably. "She will be out sightseeing.

"With the Doctor," he added quickly.

This was the part which Lockhart had been dreading all morning. Maybe it was guilty conscience bothering him—the others would be sweating it out night and day until the ship arrived, while he had nothing to do but show off the countryside to a girl—but he felt the need to defend himself, and her. He said:

"You've all been told of the effect this planet has on Galactic citizens. To them Earth is Heaven. Giving her a last look around is the least we can do. Knowing the Agency, the risks she will run in taking our evidence to the Galactic Court will be great—"

"She says," said Fox, *sotto voce*.

Lockhart felt suddenly, unreasonably angry. His face and neck began to burn and hot words rushed to his lips. But Hedley, speaking quickly, poured on the oil.

"I admit the possibility that Miss Kelly is making fools of us," the agent said gravely, "but I am, myself, of the opinion that she is what she says she is, namely, a Federation agent whose duty it is to correct the situation here. I'm afraid we must operate on this assumption, do exactly as she says, and hope.

"She and Cedric will take the evidence to the Galactic Court on Harla," he went on, "a dangerous job as Lockhart has pointed out. Our job, she has told us, is simply to furnish this evidence and leave everything else to her.

"Doctor," he said, with an abrupt change of subject, "You're supposed to pick her up in fifteen minutes . . ." Delicately, he left the sentence hanging.

Lockhart nodded and rose. Fox tossed him the keys of the car and he turned to leave.

"I did want to see that spaceship," said Keeler. He sounded like the victim of a great injustice.

"That *invisible* spaceship?" Draper asked drily.

The rest of the conversation was cut off as Lockhart closed the door behind him.

What was wrong with him these days, Lockhart asked himself as he manoeuvred the car out of the park. He was jumpy, he lost his temper over nothing at all, and only yesterday he had wanted to murder Cedric—literally beat him to death. Lockhart had always considered himself to be a sane, well-integrated person with proper control of his emotions. A bit on the stuffy side, perhaps, but definitely a stable type. Yet here he was, just itching to pick a fight with someone.

The fact that the 'someone' might be the only person capable of saving his ungrateful hide—along with billions of others—did not matter much. Just how selfishly stupid was it possible to become?

Half an hour later Lockhart's black mood had dissolved in spite of himself. The Law of Sympathetic Magic, he thought wryly; the day was warm and cloudless, the kind that picnickers prayed for, and there was a fresh, clean breeze from the sea. And the face of the girl riding in the seat beside him was a reflection of the weather. Bright, warm and expectant, her expression brought back the memory of the time he had taken his little niece to her first circus. The look in the Kelly girl's eyes was exactly the same.

Lockhart still had questions he wanted to ask, but seeing her like that made it difficult for him to remain suspicious. Conversely, it was hard to feel reassurance either. If this wide-eyed girl was to be their champion against the Agency . . .

Unless, the thought came writhing into Lockhart's mind, she had had the time to acquire sufficient experience to take care of herself and the interests of Earth both. There was, after all, the longevity treatment.

But that particular line of thought was distasteful to Lockhart. He forced it out of his mind.

The low stone walls bordering the road were temporarily cutting off their view of distant Dunluce Castle, and the Atlantic rollers breaking in white fury against the cliffs beneath it. For several seconds at least, Miss Kelly would have nothing to claim her attention.

"I wonder," began Lockhart. "if you'd mind telling me something . . . ?"

What he wanted to know was how she meant to reach Harla, with the evidence that would certainly put the Agency out of business, and by using only Agency transport to get there.

She was quiet for so long after he put the question that Lockhart wondered whether or not she would answer at all. But finally she did.

"Bribery," she said simply, then added, "I'd better explain what, I hope, will be my procedure.

"To understand you must realise that the Agency is not completely bad," she went on. "Only a few of the highest officers know what is going on here. The other employees would be horrified if they knew of it, and it is these who will, for a price, help me. The most dangerous part of the journey will be its beginning. The shuttle which is to land late tomorrow night will contain Agency men, but they will have undergone a conditioning process which keeps them from deserting or becoming too curious about their duties. This conditioning—the use of which in itself is criminal—dulls the mental efficiency, so that I should be able to convince them that—"

"Wait," Lockhart broke in. "You said bribery. What can you bribe them with?"

"This," she said, and held out a square, brightly coloured envelope so that he could see it without taking his attention from the road. It was a set of stereoscopic colour transparencies of the Swiss Alps. "There is nothing to match that scenery anywhere else in the Galaxy," she went on, a queer tightness in her voice. "One of these



can be sold for a large fortune on any planet of the Federation. But their exchange value depends on how much profit the bursar of the ship carrying me will want, and other ship's officers will have to be bribed also. Probably it will require seven or eight of these to take me where I have to go."

There was a bitter edge to her voice. Apparently a civilisation spread over hundreds of star systems had its equivalent of an Earthly black market.

"I have several others at my hotel," the girl continued, "but I need more. The type showing landscapes rather than cities or architectural subjects. We can get them in Londonderry this evening."

It was hard to credit that trip half-way across the Galaxy was to be paid for in picture postcards, or their modern successors, rather. Lockhart had been told that the planet Earth was unique, but only now was he beginning to realise just how extraordinary a place it must be.

At Portrush Lockhart turned inland to Colereine, and continued through Limavady towards Londonerry. Miss Kelly was quiet for most of the journey, but he did find out that Hargon, the old man in Paris, had been the chief administrator on Vitlimen before their superior—Harlnida—had asked him to find out why so many of his best men were dropping out of sight. Hargon had discovered the reason; Earth. The Agency had seen to it that anyone making their way to Earth never left it, and the once young and vital chief administrator of an entire planet had died, desperately fighting both the accelerating ageing of his body and the conditioning that demanded he kill himself at the slightest danger of his identity or origin being discovered.

Lockhart thought of the capsule that had been in the old man's mouth, almost dissolved but not swallowed. Hargon had known that he was being watched then, and he had tried to help.

In Derry Lockhart found a photographic dealer's and pulled up outside. The shop kept a stock of the transparencies which Miss Kelly wanted, and she began to sort through them. It was not long before Lockhart began to feel uncomfortable. He did some rapid mental arithmetic, then firmly took the girl to one side.

"You've got over two hundred sets, and fourteen viewers, there," Lockhart whispered fiercely. "Enough, at your own valuation, to move half the population of Derry to the other side of the Galaxy. You can't need all of them, and anyway, I haven't enough money to pay for them."

The girl gave him a startled, uneasy look, then quickly composed her features again. "I have money," she said, and drew out a half-inch thick bundle of clean, crisp one-pound notes. "Will you pay for them and ask that everything be packed very securely, please."

Lockhart could not think of anything in what he had just said that could make her uneasy. He gave up trying and just did as he had been told.

It was in a restaurant an hour later that Lockhart again remembered the wad of notes. He said, "Where did you get all that money?"

"Cedric gave it to me," Miss Kelly replied easily. She was holding a postcard with a picture of a roughly conical mountain on it which

she had picked from a display stand near the exit. "The Agency makes it," she added.

Lockhart choked on his coffee and went into a strangled fit of coughing. When he got his breath back he began angrily to explain about counterfeiters, the law regarding them, and the unfairness of passing such money to the innocent shopkeeper. He took a long time to run down.

"Those were very good copies," the girl said quietly when he had finished. "The shopkeeper will lose nothing. And think what difference will real or counterfeit money make to him if an H-bomb drops within five miles of his shop."

Deflated, Lockhart said nothing. If anyone was above the law it was her.

"I would like to go there," Miss Kelly said suddenly. She dropped the postcard which she had been holding beside Lockhart's plate and tapped it with a slim finger.

"Errigal?" said Lockhart. "But it's too far. Even if we start early tomorrow we might not get back in time to meet the ship . . ."

"I want to go there," she repeated firmly.

Lockhart looked at her. As a doctor he had got to know people, the methods they used to fool others together with the even more complicated ways they tried to fool themselves. Take the Kelly girl here, for instance.

She might not admit it to herself, Lockhart knew, probably the very idea of it was unthinkable to her, but he was convinced that Miss Kelly wanted desperately *not* to catch that ship.

XI

They clung to the Land Survey marker that was conveniently placed near the summit of Mt. Errigal, trying to keep the gale which tore at their clothing from blowing them off the mountain. Sharp and clear where it was not obscured by low-flying clouds, the wild, cruel beauty of north Donegal lay around them. Like a loaf left too long in an oven and burnt, Mt. Muchish raised its brown, rounded summit five miles to the north-east. The clear, cold air made it seem so close that Lockhart felt that he could reach out and touch it. Everything was grey and purple and brown; tumbled, jagged rock, heather and the dark, wet brown of freshly-dug peat. Directly below them the road was a twisted yellow thread, and the tiny black knot in it was their car. The view was achingly, indescribably beautiful, but very definitely it was not pretty.

And it was *cold*.

The exertion of the climb had kept Lockhart so warm that he had given his heavy sports coat to Miss Kelly. Now he was beginning to regret his earlier gallantry.

Judging by her pinched face and blue lips, the girl was suffering from the cold, too—suffering, but without really feeling anything. Her eyes and cheeks were wet—which could, Lockhart thought, be due to the strong wind. But several times already today she had burst into tears, and at scenery that fell far short of the breath-taking panorama now spread before them. Lockhart tapped her arm and pointed towards the distant speck of their car, his teeth were chattering too much for easy conversation. She ignored him.

Lockhart glanced impatiently at his watch, then scrambled stiffly to his feet.

They had been up here for over an hour!

Urgently, he shouted, "We'll have to leave, or you'll miss that ship." He half-dragged the girl to her feet and began propelling her down the path.

An hour, he thought. It had seemed to be not more than ten minutes. No wonder he was so cold.

The path was steep and narrow, following the edge of a razor-backed ridge, and it was the only means of reaching the summit without the use of climbing tackle. It was safe enough, of course, provided one did not allow one's eyes to wander from it to the depths on either side. The sweat broke out on Lockhart when Miss Kelly, who was a short distance ahead of him, stopped suddenly. He bumped into her, nearly overbalancing both of them.

"Wait!" she said, and pointed.

It was a cloud, one of the low, cottony rainclouds that were blowing in from the sea. This one was headed straight for them. Lockhart could look down on it as it approached, until the up-draft caught it and sent it boiling up the slope towards them. Like a horde of maddened ghosts it rushed silently over and past them to stream out over the valley on the other side.

The girl laughed exultantly and resumed the descent.

Later, when the car was travelling as fast as the road conditions would permit, and sometimes a little faster, Lockhart asked worriedly, "When exactly will that ship land, Miss Kelly? We've wasted a lot of time here."

He had only meant to show her the mountain, not climb it and spend over an hour at the top. If he did not bring the Kelly girl

back in time, Hedley would have things to say—though probably not as harsh as the things Lockhart would be saying to himself.

"Wasted?"

Lockhart kept his eyes on the road, but he knew immediately that he had made her angry. She took a deep breath.

"As accurately as the transposed time-measuring systems will allow, I expect the ship to arrive between eleven-thirty tonight and two-fifteen tomorrow morning. And Dr. Lockhart," she went on coldly, "my name, or the abbreviation of it allowed to a person who has spent several hours alone with me, is 'Kelly.' That is the pronunciation, the spelling varies with the language used. I have mentioned this before.

"The word-sound 'Miss,' she added, a hint of apology creeping into her voice, "has very unpleasant connotations in the language of my home planet. You had no knowledge of this, I know, but the constant repetition of the word is irritating when linked with my name, especially when it is unnecessary."

Lockhart sneaked a quick, sideways glance at her face. She was angry all right, he saw, but was it really at him? He had the impression that she was fighting a war with herself, and he was merely an innocent bystander. Again he wondered, was she deliberately trying to miss that ship, or at least, *hoping* she would miss it? She must have gone through a lot to reach Earth and Cedric, the ready-made fifth column inside the Agency. Lockhart remembered suddenly what the Professor had called her. Joan of Arc, he thought, was beginning to show signs of battle fatigue.

Not that Lockhart blamed her. The forthcoming trip, to him, seemed to be dependent on luck rather than planning. He, personally, would not like to be in her shoes. Or maybe there was planning, but semi-barbaric Earthmen like Hedley and himself were incapable of understanding it.

"I'm very sorry, Kelly," Lockhart said carefully. A few seconds elapsed, and he added, "My abbreviation is 'John.'"

"John is a pleasant name," she said, all trace of anger gone from her voice. "Its sound is innocuous both in Galactic and the other planetary languages with which I am familiar. But this," she went on, her voice deadly serious, "is not the case with many of the often-used word-sounds in your language.

"If you were a passenger on an Agency tourist ship you would have to be very careful about such things. Even an unthinking gesture or change of facial expression could cause serious trouble, and possibly death. That is the reason why the passengers adopt an attitude of . . ." In considerable detail she explained the code

of behaviour forced on interstellar travellers for their protection, a code that was supposed to make it impossible for one human to unknowingly insult another from a different cultural background. It was complicated.

"A pleasure cruise on a ship like that wouldn't be very nice," Lockhart said. He laughed to ease the earlier tension. "I'm glad it's you and not me."

The girl turned without answering and began staring through the farside window at something.

He took a wrong turning just after leaving Letterkenny, and rather than use one of the secondary roads which would have brought him back on route—and which might also lose him completely—he had to backtrack. It was nearly eight o'clock when they reached Derry. Lockhart left the car for exactly three minutes, and when he returned he dumped a warm and odoriferous parcel in Kelly's lap and got behind the wheel again.

"Fish and chips," he said. "It's all we've time for."

Outside the town he let go with one hand and began feeding himself. Kelly hadn't left very much for him. But it didn't matter, his stomach was too tight with anxiety to hold much food.

They were on the outskirts of Portrush when the girl said, "There's a building I want to visit here—"

"Look, we haven't time," Lockhart snapped. Angrily, he pointed out that it was almost dusk, that the ship might arrive early, and that Hedley and the others must be worried stiff about them by now.

"Please. It won't take long," she pleaded; then, "The next turn left."

Lockhart swore under his breath, and nosed the car into a narrow street leading towards the sea front.

It was a big white building which she pointed out to him, ablaze with neon lighting and with music drifting out through the brightly-lit foyer. Lockhart gave it an incredulous stare, shook his head and said, "You can dance?"

"No," she replied. "But I come often with Cedric, for the music."

ALFIE McCONNEL and his Orchestra were featured nightly, the display poster outside had stated. It was a small outfit, Lockhart saw, but they most decidedly cooked with gas, and the numbers were dressed in a most pleasing fashion and served up hot—or was "cool" the word used nowadays. McConnell himself sang, played trumpet and waved his arms in front of the band, frequently doing all three during the course of a single number. Lockhart

grew aware that his right foot, which had been tapping impatiently against the floor, was now beating time to the music and that he had no inclination whatever to stop it.

The number ended and the band went into another. This time it was a waltz.

"Please," Kelly said suddenly, "I would like to—to try it."

The floor was crowded with couples shuffling around cheek to cheek and locked tightly together. Lockhart, who had taken his dancing seriously in his student days, deplored this modern habit of "creeping," but at least there was no skill required for it. He said, "Just one, remember," and glanced anxiously at his watch. They moved off.

Lockhart had expected her to trip all over his feet, but he received a pleasant shock. He found himself forgetting that she had feet at all. Kelly seemed to possess a natural sense of rhythm, and the music moved her as though each separate chord was the controlling wire of a puppet-master. But it was only her feet that he was able to forget, because she had automatically adopted the cheek-to-cheek stranglehold of the "creepers" around them. It began to bother Lockhart, but pleasantly.

"I remember this work," the girl said dreamily, her words muffled against his chest. "It was used in a film I saw about an artist whose short legs led to an advanced state of neuroticism, making it impossible for him to achieve complete adjustment to his environment and causing him much unhappiness." She sighed as the number came to an end, but showed no signs of leaving the floor. Lockhart listened helplessly to a Galactic judgement of Toulouse Lautrec in the middle of a suddenly empty floor.

"We'll have to go now," Lockhart said firmly when she had finished, "I'm sorry."

The band began another waltz.

"No," Kelly said, "No." She turned quickly and hurried in the direction of a small group of unattached males over by the wall. Lockhart saw her go up to one of them, a sallow-faced character whose tie was a jangling discord against the screaming pattern of his shirt, and ask him to dance. Then Lockhart was at her elbow, urging her fiercely to leave.

"Is Grandpa here annoying you?" the youth said, speaking out of the corner of his mouth. He also chewed gum. A hard man, obviously.

Lockhart had visions of the girl losing herself in the crowd of dancers, disappearing. What could he tell Hedley if something like that happened? Anger surged up in him again, the same

blind, murderous rage that had sent him after Cedric that evening in the hotel. It must have shown in his face, because the youth looked suddenly frightened and began to back away from him. Lockhart gripped Kelly tightly and guided her onto the floor again.

Why, he asked himself, should she not have another dance? Why not several? His anger faded as he thought of the thing this girl was trying to do for him, and everybody else, too. If only he could help her in some concrete fashion, instead of merely trying to make her last few hours on Earth as pleasant as possible. Hedley, he decided fiercely, could wait. Lockhart had a sudden urge to protect her, to shield her from harm. Unconsciously, his hold on her grew even tighter.

Without actually doing anything, Kelly in some subtle fashion, responded. Then Lockhart forgot Hedley, the Agency and everything else but the girl. His mouth was dry, he was sweating and his head seemed to be whirling though he did not feel the slightest bit dizzy. He thought helplessly, *Oh, blast, soft lights and sweet music . . .*

They were drawing abreast of the big french window which opened out onto a verandah, and the beach. He pushed her roughly towards it.

"John!" Kelly said, startled.

The breeze from the sea struck cold against his moist face. The cane chairs on the verandah were all filled, two shadowy forms to each chair. There were more couples lying on the moonlit sand below. He half-dragged, half-carried her across the verandah and down the steps to the beach.

"John," she said again, sounding a little frightened.

Across the soft, silvery beach, past the murmuring, prostrate twosomes, then up more steps. Lockhart carried her bodily up most of them. A few seconds later he was behind the wheel again, and Kelly was safely in the back seat. Lockhart was sweating profusely, and not only from his exertions.

Another few minutes in that place, he thought, and Hedley would have seen neither of us tonight. Silently, viciously, Lockhart cursed himself for a fool. The girl was not simply leaving his town, or even his country. She was going several million light-years away, and in only a few hours time from now.

Why, he asked himself in bitter self-disgust, did he have to start falling in love with her?

It was five minutes to eleven when they drew up before Daly's Guest House in Portballintrae. A stocky figure detached itself from the group waiting tensely beside the sea-wall. It was Hedley.

"Where in blazes have you been," he said with a cold, deadly ferocity. "We thought you'd eloped."

XII

"Anyway," he went on reasonably, "Keeler will have sense enough not to come too close. If he hasn't, his wife will."

They lay hidden in the sand dunes overlooking the White Rock, a tall pinnacle of limestone rising dramatically above the level beach. Though it was not at all convenient to the Bay Hotel, it was an unmistakable landmark for the ship whose invisibility rendered it partially blind, and the Hotel's station wagon would be on hand to take care of the new arrivals.

But two hundred yards of sand, long grass and prickly bushes lay between the Rock and the roadway where the station wagon would be parked, and while Cedric and the conditioned extra-terrestrial from the hotel were guiding the new arrivals over it—accompanied by one or more of the ship's crew—Kelly and Hedley's men would board the ship.

At least one of the Agency's ship's man would have to go along so as to recover the Cloaks which they would all be using until they reached the car.

In the hollow which sheltered them from the wind, Hedley moved restively, his eyes constantly searching the sky, the beach and the path which led back to the road. Suddenly he swore, and pointed.

"Who's *that!*" he whispered angrily. "What are they doing there this time of night . . . ?"

Lockhart could just make out three tiny figures far away along the beach. They seemed to be approaching slowly. Disgustedly, he thought that it would be just like somebody to blunder into them and spoil everything.

Draper, who was crouched beside Hedley, pushed himself onto his knees and focussed his night glasses on them.

"Well?" said Hedley impatiently.

"They are," said Draper in a carefully neutral voice, "Keeler, his wife, and Junior."

"But I told Keeler . . ." Hedley began angrily, then stopped as he realised that Kelly might hear him at the other side of the hollow. There was no telling how she might react to this.

"I expected this to happen," the Professor put in quietly. "I heard him telling his wife that nobody could stop him taking a midnight walk on the beach if he wanted one, and here he is. Mrs. Keeler knows most of what is going on, I expect, and went along to keep an eye on him. Junior, of course, goes where he likes. He probably trailed them from the hotel, it's like something he would do."

Hedley said, "I hope so."

In the silence which ensued, Lockhart's attention returned to the girl again. She was sitting apart from the others and staring fixedly out to sea. *She's afraid*, he thought. He wished he could do something.

Hedley and the others had been polite, and very respectful, towards her. Their appreciation for the thing she was trying to do for them was unmistakable; the Professor, in his less restrained moments, had several times likened her to Joan of Arc. But not once had Lockhart heard one of them express concern for her, personally. They were too busy worrying about the Big Picture, he supposed, the state of the world at large.

Didn't they think that Kelly was human. Or were extra-terrestrials supposed to be above such feelings. On a sudden impulse, Lockhart went across to her.

"You'll do it, all right," he said reassuringly, and put his hand on her shoulder. "I know you will."

Lockhart felt her stiffen. She glanced at him, then turned her head away. He drew his hand away and said awkwardly, "If I can do anything to help, tell me. I . . . we . . . appreciate what you're doing and, well . . ." He ended with a rush. "If I could help by going along, I'd do it."

And he meant what he said, Lockhart realised suddenly. Kelly had grown on him the past few days. But there was no chance of her taking him up on the offer. How could he help her; it would be like an aborigine trying to assist a private detective.

Kelly looked round at him with a start. The corners of her mouth twitched before she turned her head away again. In a strained voice, she said, "Thank you, John."

But suddenly there was no distance at all between them. Her arms were round his neck and she was making muffled, weeping noises against the shoulder of his jacket. Lockhart was too surprised to move. Dazed, he heard her tell him that she was sorry for something, but the blare of a car's horn sounded from the road before she told him what she was sorry for, and Hedley was beside them.

"Is she all right?" the agent said urgently. "That's Cedric and the station wagon. The ship must be on the way down."

Lockhart nodded. "Just nerves, I think."

"Yes," said Hedley, "That's probably it. But—"

He broke off as Kelly pushed herself away from Lockhart and grabbed for her bag. She produced a gadget rather like a large reading glass, held it in front of her face and began sweeping an

ever-widening area of sky with it. Suddenly she said, "There it is!"

A faint blob of greenish light showed on the inner face of the "lens," wobbling and growing larger as she kept it inside the instrument's field of view despite the trembling of her hand. It grew until the blob became a stubby torpedo-shape that almost filled the tiny screen. To the naked eye the sky was clear. It was hard to believe that two hundred feet of ship was practically landing on top of them. Kelly brought the instrument smoothly downward until her eye and it were in line with a point far up the beach, then she held it steady and nodded for Lockhart and Hedley to have a closer look.

The screen showed a small section of beach, with the ship resting on broad triangular fins close to the water's edge. The picture was in pale green and black monochrome, and lacking in fine detail—rather like a radar picture he had once seen, Lockhart thought. But it was this defect which would make their entry of the ship possible.

According to Kelly, a person who hid inside a field of total refraction—who became invisible, that was—automatically blinded himself to everything outside it unless he used an instrument similar to the one she was holding. With such an instrument, it was possible to see through a refraction field to a certain extent. Obstacles and people could be seen, but not clearly enough for purposes of identification. Therefore, when the passengers and crew-man whose job it was to collect their refraction field generators, or Cloaks, left their invisible and partially blind ship to follow Cedric and the Agency man to the station wagon . . .

Lockhart's mind was running over the plan for boarding the ship for the twentieth time when Kelly's voice brought him back with a start.

"It's too far. We'll have to move closer."

"Yes," Hedley agreed. "And before that goon from the hotel arrives with Cedric." He gave low-voiced instructions to the men crouched around him and they went half-crawling, half-running through the dunes in the direction of the ship. They stopped behind a rocky outcropping which Kelly said was as close to the ship as they dared go—about twenty yards. They had to take her word for that, of course, the beach looked deserted.

But not completely deserted. Lockhart had forgotten the Keelers. They were less than a hundred yards away now, he saw, and walking slowly nearer. Their son was a few yards ahead of them, moodily throwing stones into the sea. Occasionally he let

fly at some imaginary target on the beach or among the dunes. Lockhart heard someone cursing softly.

"Here's Cedric," Draper whispered anxiously.

Two figures were approaching from the direction of the White Rock. One of them held something up to his face every few minutes—a detector similar to Kelly's, Lockhart guessed. He crawled over to the girl and squinted over her shoulder. There should be something going on around the Agency ship by now, he told himself. There was.

The detector showed nine tiny figures grouped around the base of the ship, and as he watched, eight of them moved away to join the pair approaching them. They were slow and awkward in their movements, and all of them held detectors before them, like a group of caricature detectives.

The man from the hotel must have said something to them, for they followed him in single file back along the beach, with Cedric bringing up the rear. To the unaided eye Cedric was following the other man at a distance of twenty or thirty yards. It took very sharp eyes to see the little scufflings made by invisible feet in the sand between them.

Cedric would pretend to get a stone in his shoe, fall behind, then join Hedley's party as soon as possible. But nobody had expected a crew-man to stand taking the air outside the ship. And the proximity of the Keelers was a further complication. Lockhart began to feel the first stirrings of panic. Something was going to go wrong here, horribly wrong.

Just then Keeler stopped. He pointed at the dunes and said something to his wife—probably about the advisability of hiding before they got too near the White Rock which was where he expected the ship to land. Both of them turned sharply inland, the FBI man calling for his son to follow. Lockhart relaxed, and beside him he heard Hedley's sigh of relief.

But young Keeler had other ideas, he wanted to go on throwing rocks. He made one last, bad-tempered throw before turning to follow his parents.

The pebble hit the ship with a clang that must have been audible in Portrush.

Things happened quickly after that. Lockhart saw Keeler break into a sprint towards his son, and his son start running in the direction from which that intriguing noise had come. Knowing that the ship would be invisible when it came, the FBI man must have guessed what had happened. Simultaneously the girl saw the

Keeler's for the first time. Horror-stricken, she cried, "What are they doing here?"

Lockhart snatched the detector from her suddenly trembling hands and lined it up on the base of the ship. The important part now was how the crew-man reacted to all this.

The tiny, ghostly image had moved away from the ship, and it was clear enough for Lockhart to see that the man was fiddling with something at his waist. That meant only one thing, he was about to switch off the generator of his "Cloak"—as the refraction field was called—so as to clearly see the figures who were apparently charging towards him. Lockhart saw him exchange the detector which he had been using for another instrument. It looked like one of the needle-guns.

Lockhart whispered a hasty account of what was going on to Hedley, then returned the detector to Kelly. For what was about to happen, he would not need it.

The Keeler boy screamed suddenly, "*Pop!*"

Though Lockhart knew the explanation for the effect now, the sight of the quivering, rippling head and shoulders of the Agency man—caused by residual radiation from his Cloak—sent a shiver of remembered horror along his spine. The last time this had happened had been in Paris when Gates had died. If something wasn't done quickly now, he knew that there would be a similar—and double—killing here.

The Agency man was aiming at the cowering and terrified figure of young Keeler, obviously bent on dealing with the stationary target before finishing off the charging FBI man. Then Keeler's wife, seeing the twisting, undulating features of the crew-man for the first time, screamed . . .

A hydrogen bomb seemed to go off a few inches from Lockhart's ear as Draper fired his .45. The bullet *spanged* against the metal of the ship and whined off into the night. The Agency man whirled to face this new threat. Then a second bomb went off in his other ear as Hedley fired. The crew-man spun half around and pitched sideways onto the sand.

Hedley said, "Come on!"

Lockhart clutched his bag and charged with the others towards the apparently empty section of beach containing the ship. He saw Keeler land on the squirming Agency man and tear the weapon from him. Mrs. Keeler was hugging her son and crying and, far up the beach, the figure of Cedric was racing towards them, hotly pursued at a distance of about fifty yards by two other men whose

outlines wavered with the after-radiation of their refraction fields. Lockhart stumbled into Hedley as the agent stopped and raised his gun again.

"Don't kill them!" Kelly called urgently. "They have to work the ship!"

Hedley grunted. His three shots kicked up sand ahead of their running feet. Cedric's pursuers halted so suddenly that one of them fell onto his knees.

Suddenly the ship was towering into the night only a few yards away. Simultaneously with the appearance of the ship the beach vanished, being replaced by a cylindrical wall of silvery mist which encircled it to within a few yards. Lockhart heard Kelly directing that the wounded crew-man be brought to the ship, and suddenly the misty cylinder around them was filled with people milling around the ship's entry port. The Keelers came stumbling through the invisibility screen, Kelly having decided that it was too dangerous for them outside. They were followed closely by Cedric who came through it at a dead run. Kelly and Cedric entered the ship, followed quickly by Draper, Fox and Lockhart carrying the wounded Agency man, with Simpson bringing up the rear with Lockhart's bag. The Professor had long since been detailed to stand by the car and keep the engine running.

There was a vague impression of spiral stairways and masses of surrealistic plumbing, but Lockhart was too rushed to notice details. They stopped in a small compartment filled with soft-looking chairs. Passenger lounge, Lockhart guessed. Kelly pointed to a shiny mechanism built into one of the walls, then left with Cedric for the control room, saying that she had to arrange her trip. Shortly afterwards, two pairs of footfalls went past the lounge, going upwards—no doubt the two members of the crew who had escorted the new arrivals.

The wounded man was groaning softly on the floor. While Hedley and the others—self-consciously at first—gathered round the machine on the wall and began reading into it, Lockhart made a quick examination of the injury, then cleaned and dressed it. Carefully-chosen excerpts from Earth history, philosophy and politics droned about his ears, together with the other data which proved the extent of the Agency's crimes. It was not a very serious wound, the bullet had gone through a fleshy part of his thigh, but Lockhart took particular pains to make it a neat job. The doctor who would see it next would be an alien, and far advanced in medical science. Lockhart wanted him to think that he had been at least a good workman.

He had a brief attack of dizziness at one point. He ignored it and was just finishing off with a sedative shot when Cedric re-entered the room.

With his characteristic mincing walk Cedric went over to the mechanism on the wall. He smiled apologetically at those grouped around it, then he pressed one of the buttons set on its side. A panel slid open revealing a pear-shaped plastic container which held a clear, colourless fluid like water.

It was not until Cedric walked to the opposite wall, sipping daintily at the fluid on the way, and moved aside another panel that Lockhart realised what had been done to them.

The Earth, from eighty miles up, was beautiful . . .

XIII

The surface was receding visibly. Their acceleration must be colossal. Yet apart from that momentary dizziness—which must have been due to the take-off, Lockhart guessed—there was no sensation at all. That meant gravity control he thought, as more and more of the European land mass crawled into sight around the edge of the view-port. The dun-coloured surface was streaked and spotted with vivid orange, yellow and pink; high-flying cirrus clouds hit by the sunrise which had not yet reached the ground. It was a breath-takingly beautiful sight, but it was being spoiled by a gathering red haze.

Lockhart burst out of the lounge, a scant two yards ahead of a suddenly white-lipped Hedley, in the grip of a rage which he could not even hope to control. His hands were so tightly clenched that they hurt. Never in all his life had Lockhart been made such a fool. He had *trusted* Kelly . . .

She would be in the control room, Lockhart told himself as he viciously pulled himself up ladders which—in the crew quarters—had replaced the spiral stairways of the passenger section. What she would be doing there, now that he knew her for the cheat and liar that she was, he did not know. But if he could only get his hands on her, he would . . .

The sound of Hedley close on his heels did not register fully with him until a large, strong hand closed around his ankle.

"Where d'you think you're going?" Hedley asked, gasping.

Lockhart told him where and why. He kicked out angrily, trying to free his foot from the agent's grip, but succeeded only in losing his balance so that he dropped a rung and almost fell from the ladder.

"So she made fools of us," Hedley said, head thrown back and glaring up into Lockhart's face. "Does that mean you have to barge in when she's in the middle of a tricky situation. You don't know what exactly is going on up there, and one mistake on your part will mean curtains for everybody—and in your present frame of mind, you'll make mistakes."

"But she's on their side—"

"Don't be a fool!" Hedley was impatient as well as angry. "She's on our side, make no mistake about that. Dammit, I thought you, especially, would have been expecting this, spending so much time with her as you did. The rest of us were."

Lockhart gaped at him.

Hedley said, "There was her refusal to allow Keeler and the Professor aboard the ship—though both would have been in little danger on a purely temporary visit to the ship. And her story about *recording* through a lie-detector! A recording could be faked just the same as documents and would be useless as evidence.

"We were meant to go to Harla from the very first time she realised that you and the Professor were not Agency men, but Earth humans who knew, or suspected, enough to believe her when she told you who she was and what was going on."

"But why didn't she *tell* us?"

Hedley grimaced. "If she'd told us, I would have had to tell the department, and you can imagine the complications that would have caused. We could not have gone until a full investigation had been made, and by that time it would have been too late. I think she knew this, and decided to keep the whole truth from us until we were clear of Earth."

Lockhart's mind seemed to be doing somersaults inside his head. So Hedley knew of, and condoned, the kidnapping of eight humans from Earth! Well, not exactly eight—the Keelers being on the ship was accidental. The realisation shocked him. It also caused the blind fury which had driven him towards the control room to subside. Lockhart was angry now only because he, alone, had been made to look foolish. Everyone else had expected this, and now that he thought of it, the girl had tried to tell him, or at least hint at it, on one or two occasions. Lockhart's protest was instinctive.

"But supposing I—we—didn't want to come?"

"I hope," said Hedley quietly, "that that is a purely rhetorical question."

Looking into Hedley's level brown eyes, Lockhart made a surprising and very disquieting discovery. The agent was a fanatic, one of those hopeless, disillusioned idealists, so common after the

war, who could not find anything to be idealistic about. Patriotism was these days referred to cynically as applied propaganda. But Hedley, he saw, had become a patriot again, and in the widest sense; his patriotism embraced a world and a species now, instead of merely a country and a race. Hedley had found an ideal again, one that in his quiet and matter-of-fact way the agent would not mind dying for.

Lockhart felt very proud of knowing Hedley at that moment, proud, and very much ashamed of himself.

"Doc, this is crazy," the agent said, grinning widely. "Come down where we can talk comfortably, for Pete's sake!"

Hedley and Lockhart were spread vertically along about twenty feet of ladder, with the agent hanging grimly onto his right ankle. Lockhart smiled in spite of himself and began to descend. He had just reached deck level when there was a faint scraping sound from the deck above.

There was somebody up there. Lockhart could see their outline through the open grill-work of the deck. And they had been there for some time, otherwise he would have heard their approach, which also meant that the conversation between Hedley and himself had been overheard . . .

The scraping sound of shoes against metal was repeated, and a pair of legs clad in dark blue slacks began to descend the ladder. Kelly!

It was obvious from her face that she had heard everything. Lockhart deliberately looked away as she made to speak to him. He still felt angry, and an utter fool. He wanted to get his feelings under control before he risked talking to her again.

"I'm sorry I had to mislead you . . ." Kelly began.

"We understand," Hedley said quickly, cutting short the apology. "But what about the Keelers. I told them to follow the main group to the lounge as a safety precaution—they would have been killed on the beach for sure. Can you have them landed again?"

Kelly shook her head. "We rendezvous with the parent ship in seventeen hours, shortly before it resumes its journey. There is no time . . .

She stopped suddenly and changed the subject without warning. She looked frightened.

"You are Agency recruits," she said quickly. "All of you with the exception of Cedric and myself, so act accordingly. The pretence will be necessary until we transfer to the parent ship, and afterwards unless I can find a trustworthy Agency official."

She darted a glance upwards, and for the first time Lockhart heard the approaching footsteps. Kelly rushed on:

"The officers of this ship know that Cedric is an Agency man, but not that he has changed sides, and he has convinced them that I am a high Agency official. Together we have made the Chief Officer believe that your group are Earthmen who have stumbled onto the Agency by accident, that you will do anything for the secret of longevity, and that your attempt to seize their ship was in the mistaken belief that the apparatus for administering the treatment was aboard. The error has now been pointed out to you by Cedric and I, and our job is to smuggle you aboard the parent ship without the other passengers knowing about it. The Agency welcomes Earth-human recruits. They are the only ones who can do efficient work on the planet. The Galactics, unless they have been conditioned into near uselessness, are 'softened' by contact with it."

She opened her mouth to say something else, then changed her mind. The ship's officer was almost beside them.

The man looked disappointingly ordinary. He had the same dark, vaguely Spanish features possessed by Kelly, but that was due to his world being populated by a single, homogenous race. Only Earth, Lockhart had discovered, was blessed—or cursed—with racial differences of colour and physique. He wore shorts and a loose blouse, with a row of badges vertically bisecting his chest. A heavy, cloak-like garment was thrown back from his shoulders, revealing the generator of his refraction field strapped to his waist. This had been one of the escorts for the new arrivals, until the shooting had brought him hurrying back to the ship.

The officer looked with sharp curiosity at Lockhart and Hedley, then his face became expressionless. Folding his arms stiffly across his chest, he bowed his head slightly to each of them in turn. He wheeled and began to remount the ladder, talking rapidly to Kelly as he climbed.

"You are to go to the control room for language impression," Kelly translated, motioning them nervously upwards. "They have two Educators there and you are to be given Galactic. He says it will save time and annoyance if you can understand what is being said to you during the transfer. And . . . and . . ."

Her eyes were boring into Hedley, pleading, pitying and despairing all at once. Her face was white. "Oh, be *careful*," she sobbed, and turned quickly towards the ladder leading down to the passenger lounge.

Lockhart followed a pair of feet and legs, clad incongruously in calf-length boots of completely transparent plastic, past two deck levels and along a catwalk to the control room. Too much was happening too quickly, he told himself helplessly. His brain could not accept the knowledge that he was no longer on Earth. Refusal to face reality was a mentally unhealthy reaction, he knew, the first step towards catatonia. But he did not want to fight against anything that these aliens might do to him. Let Hedley and the others do the thinking and worrying, this was too big and complicated for him now.

Desperately, he wished that he could just wake up.

They were led to a couple of chairs set in the middle of the small control room, a few feet behind the control-chairs which were spaced evenly before the semi-circular instrument board. There were large vision screens facing each chair, but the only one in operation was blocked by the head and shoulders of the officer using it. Abruptly the view was further curtailed by the other occupants of the control room standing over him. One held a heavy metal helmet with straps and wires hanging from it.

Hedley watched him anxiously as they fitted the helmet tightly over his head; the agent would be next. An intolerable itching sensation began inside his skull, and Lockhart instinctively made to scratch it. But before his hand was raised six inches, everything—light, sound and feeling—switched off.

Lockhart awoke as suddenly as he had been knocked out, and because his hands were still lying in his lap he saw his watch. Two hours had passed. With an incredulous glance at the officer standing over him, he looked across at the still-unconscious Hedley. The agent's hair was awry. Lockhart guessed that he had offered some resistance to the helmet being fitted after seeing what it had done to himself.

"Attend, please!" the alien said briskly. "Go to the passenger compartment and send two more Earth-humans here for language instruction. Also—"

"But you're speaking *English!*" Lockhart burst out.

The officer looked impatient. "Speak Galactic," he said. "That gibberish means nothing to me."

It was only then that Lockhart realised that he was thinking—sub-vocalising, rather—in two languages instead of one. *Some Educator*, he thought admiringly. Aloud, he said, "Sorry."

The Galactic word for it felt awkward for his tongue, but he knew that he had pronounced it intelligibly.

"Very well."

From his general air of authority as well as the intricacy of the badges running down his blouse, Lockhart decided that this was the ship's Captain. The officer went on:

"You will also see that these men carry the body of sub-Captain Kernetsin to me here, and that the Earthmen responsible for his death accompanies them."

There were only two Educator helmets in the control room, Lockhart knew. Then what fate awaited the third man, the man who had shot this Kernetsin . . .

With a tremendous effort, Lockhart kept himself from looking at Hedley. This explained Kelly's panicky warning to the agent as they were coming to the control room. But why had she not been more specific, or used her influence to protect him? He could not answer, and speculation was useless at the moment. He had to head the Captain off somehow, and quickly. Lockhart was frightened by the other's expression. One wrong word and he might witness the summary execution of Hedley by the Captain.

"But he wasn't killed—" Lockhart began quickly. He was interrupted.

"So I have been told," the Captain said harshly. "But I trust he is dead now. Despite the fact that the projectile fired into his body contained none of the lethal and painless poisons, its large size must have caused widespread damage and bleeding which is impossible to repair or control. The suffering which this crude and barbarous weapon has caused him is inexcusable."

His lips tightened, and he looked slightly sick.

"But he's all right," Lockhart repeated, and began describing the wounded officer's condition. "Why not go and see for yourself."

The Captain hesitated, then gestured for Lockhart to precede him from the control room.

When they reached the passenger lounge, Lockhart saw that the occupants were grouped around Kelly, all talking loudly. Cedric stood beside and slightly in front of the girl, as if expecting violence. Mrs. Keeler was still crying despite—or maybe because of—the awkward attempts at reassurance by her husband. The only one enjoying himself was the boy, who was having a noisy game of Space Pirates at the observation port. Silence fell as the Captain appeared behind Lockhart and strode quickly to the prostrate Kernetsin.

Kelly went pale when she saw that Hedley was not with them. Her face told Lockhart two things; she had been expecting it, and the penalty for shooting an Agency officer was severe. She thought that Hedley was already dead. Anger, a sick helpless anger began

to boil up inside him, but Lockhart fought it down. He had to, for Hedley's sake.

The Captain's eyes flicked about, missing nothing; the resilient plastic cushions stripped from nearby chairs on which the wounded man lay, Kernetsin's pale but relaxed face, his slow, even breathing, and finally the neatly-bandaged thigh. He gestured angrily for the dressings to be removed.

As he gently uncovered the wound, Lockhart's mind began to work rapidly and on two levels. While describing the sleeping officer's injury and its treatment to the Captain he was arriving at an unpleasant and rather terrifying conclusion regarding Kelly. They had been depending on the girl too much. She was honestly trying to help them, he knew, and risking her life to do it, but she was no superwoman. Kelly was trusting to luck more than anything else. She had a wider knowledge than the Earth party of Galactic affairs, but her control of the present situation was practically non-existent—otherwise she would have done something to save Hedley. She had tried, probably, but without success.

To Lockhart, it was painfully evident that if they were to save their world or themselves, they, the Earth humans, would have to do it—with Kelly's assistance.

The Captain signalled for the dressing to be replaced. Straightening up, he gave Lockhart a peculiar, baffled look.

"Are you a Doctor?"

The word, in Galactic, was not quite "doctor," or "surgeon" either, but something like "medical technician." Lockhart swallowed nervously and nodded.

"The damage seems to have been . . . repaired," the Captain went on. For a moment his features worked uncontrollably, and Lockhart realised with a shock that the Captain was regarding him with awe. "I've heard of such work being done on the Central Worlds, and that the injured often survive, but out here . . ."

Surely, Lockhart's mind protested wildly, the Captain's words did not mean what they seemed to mean. These people possessed a fantastically advanced medical science; longevity, even immortality, perhaps. What was so awesome in a couple of neat sutures and a bandage . . . ?

"If you wish," the Captain said, the harsh, tight lines of his face relaxing into a smile, "you may view the landing on your satellite from the control room."

He wheeled and left the room, passing Hedley, who had just returned from the control room, at the doorway. He made no further mention of punishing the man who had been guilty of wounding sub-Captain Kernetsin. Apparently he had forgotten all about it.

XIV

Lockhart sat in the ridiculously tiny sick-bay of the mighty *Shekkaldor*, pride of the Agency passenger fleet, using the few minutes left to him before the arrival of the ship's Medical Officer to try catching his mental breath. Of course, the words "sick-bay" and "medical officer" were approximations only. Nobody took sick on this ship apparently, and judging by the equipment that was in sight, the man in charge of it seemed to be more librarian than doctor . . .

A sigh from the figure in the room's single bed broke into his thoughts. Though Kernetsin was doped semi-conscious, resting comfortably and in no danger at all, Lockhart had a look at him.

He had a very warm feeling for the sub-Captain.

Twenty-four hours ago in the ferry-ship the future had looked hopeless. Kelly had convinced its officers that Hedley's party were recruits, but the driving force that kept the Group together, Hedley himself, had been in deadly danger over the shooting of Kernetsin. Away from the civilised centre of the Federation, an eye for an eye seemed to be the rule. Lockhart had not known why his treating of the wounded officer produced such a marked thaw in the ferry-Captain's feelings until after the transfer to the parent ship. It was then that he found out that Kernetsin was sub-Captain, not of the ferry, but of the *Shekkaldor*, and that he was related to Kerron.

Kerron was Captain of this ship, and as such was only a couple of steps below God. And this near-dietary approved of Lockhart, apparently.

But their good fortune did not end there. It had been explained to Lockhart that hyperspatial travel was instantaneous, that time was consumed only during take-offs, stopovers, and landings, and that the *Shekkaldor*, with just three brief stops on the way, was bound for Harla!

The party was placed under a certain amount of restraint, however. They were forbidden contact with the other passengers, who were on a legitimate tour and had no idea of their proximity to the half-mythical planet Earth. But Hedley and the girl were not interested in passengers, they planned to win over any officers ignorant of—and therefore opposed to—the Agency's intentions for Earth, officers both sympathetic and powerful enough to protect them on the way to Harla.

Kelly had wanted to tell everything to Captain Kerron. He had struck Lockhart as the stern, just and highly moral type who on

Earth would have fitted well behind a High Court bench. Kelly believed that he could be trusted, and he was the ideal person to help on the ship, but the cautious Hedley had urged her to wait.

Smiling inwardly, Lockhart looked closely at the face of his patient. The features were almost identical, the chief difference being that Kerron's hair was iron grey while Kernetsin's was jet black. But the Captain's grey looks were simply affectation, according to Kelly; the higher officers dyed their hair in an effort to look old and distinguished. The younger-looking Kernetsin was really Kerron's grandfather, Lockhart had learned. It did not seem so improbable when the twin factors of wholesale rejuvenation and authority based on ability rather than age were taken into account.

The soft noise of a sliding panel made Lockhart look up. A man stood in the doorway dressed in shorts and blouse of what looked like liquid silver. He wore a red, sash-like affair across his chest, and his features were from the mould that had given Lockhart the impression that *all* the aliens were related. He stepped into the room, folded his arms, dipped his head by not more than half an inch and announced, "I am Naydrad."

"I'm Lockhart." Naydrad was the ship's M.O., and courtesy towards a colleague was automatic with Lockhart. He stuck out his hand.

Naydrad gave a startled look at the proffered hand, dipped his head again hastily, then bent over the patient. His ears were burning.

Lockhart cursed his own stupidity under his breath. He had just dropped a large brick. And after Kelly's repeated warnings about making sudden and unthinking gestures to these people. God alone knew what an offer to shake hands meant on Naydrad's home planet.

But it could not have been too insulting, because Naydrad quickly began asking questions. His questions were more detailed and searching than those of the ferry-ship's Captain, but they were also more revealing. The *Shakkaldor's* M.O. was woefully, and inexplicably, ignorant about the simplest things.

Lockhart had resigned himself to the role of a child sitting at the other's feet, eagerly absorbing the simpler concepts—everything else being beyond his mental grasp, of course—of a true Master. That was what he had expected. But now Naydrad was hanging on *his* every word . . .

This, Lockhart reminded himself angrily, was a representative of a culture that spanned the Galaxy, a culture which had possessed

the secret of longevity for centuries. Lockhart could contain his curiosity no longer.

"You have, I believe, the means to extend life," he interposed hastily between the other's questions, "and are therefore far beyond Earth with your medical science. Why is it that such—er—crude methods of surgery interest you?"

"Longevity," Naydrad answered, "is not a surgical treatment." He hesitated, then asked another question. "You and your companions risked much to join the Agency, and merely because of the longevity treatment. Why?"

Feeling that it was a stupid question, Lockhart told him some of the reasons—both selfish and altruistic—why a person would like to increase his life-span. He ended "... Everybody wants to live longer. There is so much to do, to enjoy."

"No," said Naydrad, and there was a great sadness in his eyes, "you are wrong. Galactic citizens undergo the treatment because it is the accepted thing to do. Long life is no longer striven for, unless one happens to be an exceptionally gifted person such as an Administrator or . . ." he smiled wryly, "... a high executive of the Interstellar Travel Agency. There is nothing to do or to enjoy which retains its appeal after one normal lifetime. If one is rich enough, boredom can be held off for a time by travel, but even then . . ."

"But the science behind this longevity," Lockhart interrupted gently but insistently. Kelly had told him something of the cultural desert that was the Federation, but he could wait for further knowledge on that subject. Nodding towards the patient, he went on, "I had the impression that the Ferry-Captain intended killing this man, in the same way as we are sometimes forced to shoot an injured horse, until he saw what I had done to the wound. Surely you can cure such a simple injury?"

"The medical science of the Federation is, and has been for many hundreds of years, preventative rather than curative," Naydrad explained. "In those early days life was still precious. Longevity and interstellar travel had come simultaneously, and every star system was a promise of escape from the monotony of home. Because of this, every machine, city and individual became weighed down with safety devices to ensure that this precious life would not be accidentally lost. Accidents due to gross physical injury became so rare that the ability to deal with them had been lost. But the promise was an empty one. There was nothing new under any sun, everywhere was the same.

"Pain and sickness—thanks to preventative medicine and the efficiency of our safety devices—is virtually unknown, and pain is the only thing which frightens us. That is why our weapons are invariably lethal, and painless."

As he talked, Naydrad drew a small, intricate mechanism from a recess in the wall and brought it towards Lockhart.

"You are still obsessed with the thought of longevity," he said, smiling. "Permit me to make a demonstration."

The machine looked like nothing Lockhart had ever seen before—probably, he decided, because it was meant to do something he had never heard about. Attached to it by a length of thin, silvery and highly flexible tubing was something which resembled one half of a pair of thick handcuffs. Naydrad slid the manacle onto Lockhart's wrist. As soon as it was in position, Lockhart felt a sharp tingling sensation over the veins in his wrist, as if several needles were pricking the area.

"They are," said Naydrad when he mentioned it aloud. A few seconds later he released the manacle and replaced the gadget in its recess, returning with a ring in which was set a smooth red stone. "Wear this," he said casually. "When it turns black you will require a further longevity shot. I estimate that as being twenty-five to thirty of your years hence."

When the meaning of the other's words penetrated, elation that was almost a pain surged through Lockhart. This was what he had wanted since that autopsy in Paris. But he had not been given details of the shot's composition. Where then was the altruism, the noble selflessness that had driven him to seek knowledge for the sake of his profession and his race? Did he, he asked himself in sudden self-loathing, want this only for himself? Surely there was more of the stuff around. If he could steal some and analyse it somehow . . . He opened his mouth to speak.

But Naydrad was speaking again.

"You can now see that the treatment means nothing to us," he said dryly. "Only Earth-humans consider it valuable, apparently." Naydrad held out a small sphere of transparent material containing a yellowish solution. "This contains enough for thirty shots—the equivalent of four hundred years of youthful, disease-free life. For various reasons, the treatment has to be given at shorter intervals towards the end.

"But pardon me, you were about to speak."

Lockhart, with his hand closed firmly around that tiny, infinitely precious globe thought, *Sample; for analysis!* That was if he did

not use it only for himself, of course. Viciously, he pushed that thought out of his mind. He swallowed, and said, "If that is all there is to it, can I bring my friends here and—"

"No!" said Naydrad sharply. "I dare not do what you ask. The Agency Headquarters on Harla give Earth recruits special training. Most of it is psychological, and I understand that the promise of longevity serves as an 'anchor' to deep, post-hypnotic instructions and conditioning."

"Oh," said Lockhart. Then curiously, "What is this training for? What are they supposed to do?"

As if I didn't know, he added bitterly to himself.

"I know very little about it," Naydrad replied easily. "The Agency discovered Earth a long time ago and ever since have been charging astronomical prices for taking tourists to it, *and* just leaving them there. The tourists don't mind because it's supposed to be an unusually beautiful planet, and the Earth natives are not harmed in any way. From what I hear it is simply a piece of innocent exploitation on the Agency's part. But if the Federation Government heard about it they might make trouble."

"The Agency isn't popular with the Government; it has become too big and powerful for just a business concern." Naydrad looked cautious. "That is why I am not very curious about Earth. There are people on this ship who were curious. They had a lot of memories erased, not to mention some other things which the Agency psychologists did to their minds. They weren't hurt, of course, but I wouldn't like it done to me."

Lockhart felt anger rising in him again. It was a tightness in his chest and across his shoulders that demanded he take a swing at something to relieve it. Trying to keep a sarcastic edge out of his voice, he said, "Why did you risk giving me the shot? Professional courtesy, or something?"

Naydrad looked at the figure of Kernetsin in the bed. "Yes," he said. "Something like that."

"I suppose," said Lockhart bitingly, "it would be considered proper to make a return gift under the circumstances?"

Naydrad looked confused, and hurt. He nodded.

Lockhart's fingers found the packet in his breast pocket, then withdrew it. It was a stereoscopic transparency set showing views of Switzerland which he had absently put there on finding that Kelly already had that set. The girl had been right in one thing at least, he thought savagely; not all the Agency men knew, or approved of, what was happening on Earth. Naydrad especially,

who paled at the bare mention of physical suffering, would certainly not approve it.

With the exception of Kelly, Naydrad was the only alien with whom Lockhart felt comfortable. He might even grow to like the other in time. Also, Lockhart knew that Kelly and Hedley planned to take similar risks with other ship's officers. That knowledge consoled him, but only slightly.

"Look at that!" he said, and slapped the brightly-coloured envelope into Naydrad's hand.

He watched while Naydrad fumbled with the envelope and, suddenly excited, as he peered at the transparencies. He produced a lens from somewhere and examined them more closely. When he spoke his voice was an awed whisper.

"Do you know how . . . valuable . . . this is?"

Lockhart nodded.

"I've heard about such pictures, but this is the first time I've seen some of them." Naydrad gave a long, shuddering sigh. "I can't believe that such . . . such . . . Oh, it is a beautiful planet!"

"Yes," Lockhart said harshly, "Yes. And do you know what your harmless and innocent Agency is doing on that planet now, at this minute? Well, I'll tell you . . ."

Lockhart told him. He did not spare any of the grisly details—the pain, waste, disease and mutilation that was war. When he had finished, Lockhart saw that Naydrad looked considerably less healthy than their patient.

"No," Naydrad protested. "No. You must be mistaken—"

"Attention!" interrupted a voice quietly from the hitherto unnoticed speaker grill in the room. "Chief Medical Technician Naydrad and the Earth-human Lockhart to Kerron in Control. At once."

So, Lockhart thought bitterly, *Big Brother was watching you*. Or listening, at least.

He could offer no resistance as Naydrad hustled him out into the corridor. The ease with which his first attempt to subvert an Agency officer had been uncovered was a paralysing blow to mental and physical faculties alike.

Naydrad seemed to be excited rather than worried by the summons to the Control room, it was an unprecedented occurrence. His eyes, however, showed that he was still digesting the facts which Lockhart had given him, and the process was causing him some distress. Lockhart could not understand his attitude at all.

He was beginning to wonder if their conversation in sick-bay had been overheard, or whether the summons was for an entirely

different reason, when Naydrad stopped abruptly and pressed a button on the corridor wall. A panel slid aside revealing a direct vision port.

"We've landed on Retlone," he said. "It's a famous beauty spot. But why aren't we disembarking passengers . . . ?"

Naydrad hurried on.

Buzzers made hoarse, intermittent noises in the corridors they passed through, which were replaced—when they entered the passenger section—by loudspeakers requesting all passengers to stay in their cabins. Naydrad was beginning to look frightened. They covered the remaining distance to the Control room at a near run.

Kelly was beside the Captain as they entered, staring at a vision screen which covered the whole of one wall. After one look, Lockhart knew that he had not been called to answer for this attempted subversion of Naydrad.

"The position is this," Kerron said, motioning them closer. "We have been ordered by the port authorities here to vacate our ship so that it can be used to evacuate some of these people." He jabbed a finger at the screen, which showed a mob of shouting, fist-waving humanity surging onto the *Shekkaldor's* landing area. "If we refuse to do this, or try to take off again instead . . ." his finger touched a stud on his desk, and the screen showed something that vaguely resembled a radar installation on the distant perimeter, "... then they will destroy the ship before we can leave atmosphere."

"The reason for this panic," Kerron went on, and strange, he seemed to be talking only to Lockhart, "is this."

The screen now showed a small, squat ship about half a mile distant. Black where it was not streaked with corrosion, it looked not much bigger than the *Shekkaldor's* ferry.

"A *Grosni*!" Naydrad burst out. His face had gone white. "But can't their Medics help them? Nobody would want to live—"

"Several thousands have already killed themselves," Kerron said harshly, "which includes most of their Medical technicians—possibly because they are a little more imaginative than most, and can foresee more clearly what is to come." His thin, ascetic face with its high, intellectual forehead registered an expression of shame, and a sick, incredulous disgust. "But it seems that—among some perverted beings—life becomes more valuable in proportion to the threat against it."

Lockhart would not have called that perversion exactly—but he was suddenly aware that the Captain was speaking directly to him.

"As Naydrad has already guessed, that ship contains the normal-space segment of a *Grosni*. It is dying. I cannot believe that anything can be done to halt the process, but I have been assured that you can deal with it." He nodded towards the girl. "Kelly has important verbal information which must reach Harla without delay. She would like you to hurry."

There was a peculiar stress laid on the final sentences. Kelly, he realised, had told Kerron all. He seemed very anxious to reach Harla now.

"What do you want me to do?" Lockhart asked witheringly in English. "Just walk over, take its pulse and write a prescription?" He looked into the frightened, appealing eyes of Kelly. Switching back to Galactic, he protested, "I don't know anything about its metabolism or physiology. I need data, detailed information. Charts, too, if possible."

It was Naydrad who gave him all the information that was known about the *Grosni*. When he had finished, Lockhart placed his hands flat on the Captain's control desk, purely as a precaution to keep him from falling to the floor. His head was spinning.

Write a prescription, a voice gibbered inside his brain. *Write a prescription*, it cackled. *Maybe a shot of penicillin will do the trick. Go on! Write fifty thousand tons of penicillin.*

Or would it be five hundred thousand tons? It was so easy to drop a nought sometimes . . .

To be concluded



BOOK REVIEWS

It is a sad, and mostly unappreciated, fact that human life on this planet exists within a narrow margin dividing heat and cold, deluge and drought, pestilence and aridity, and in the spirit of man himself domination and abjectness. A slight deviation either way and humanity suffers, individually or collectively. History has recorded the mute despair from war and frustrated peace, storms, plagues and famines and with an innate phlegm the survivors of these natural or man-made catastrophes tend to forget whilst the vast majority of peoples know of the terrors only from fiction in which such themes find a ready public. It needs but a slight imaginative shift of cause and effect to bring this fiction into the realms of fantasy. Throwing in a line or two of technical jargon to establish the author's licence for his plot may label his story "science-fiction," but what matters is the way in which his characters behave in the changed conditions which have shattered the normal way of life. Confine the change to the more credible "it can happen here" variety and the reader's participatory excitement is more intense. John Christopher's latest novel *The Death Of Grass* (Michael Joseph, 10/6d) succeeds admirably in this direction. Springing from the Far East a virus begins to destroy all types of Gramineae—sorry, grasses—all over the world. Now the humble grasses include wheat, oats, barley, rye, hence no more dairy foods, bread, poultry, meat. From a rotting rice plant in China famine stalks the world, for fish and chips alone will not support our teeming millions. From this wide canvas the author wisely selects a handful of English men and women, battling for survival in a countryside where anarchy has taken over, and proceeds to unfold, from a serene opening chapter and with gradually mounting terror, a dramatic story replete with murder, rape and fratricide. Mr. Christopher has excelled himself in writing and novel technique, and I found myself comparing this book favourably with the similar work of John Wyndham, who also contributes to the "Novels of Tomorrow" series. In fact, knowing the pseudonymic subterfuges of these companionate gentlemen, I idly speculated on a possible publisher's gaffe in the author's name! (But of course these errors are only made by tyro science fiction reviewers!)

The second novel this month has, at first sight, little in common except the publisher and a rape. (How strange it is such isolated incidents seem as out of place in science-fiction as gallantry in a modern 'private eye' thriller!) Nevertheless John Mantley's *The 27th Day* (Michael Joseph, 12/6d) despite one or two basic flaws in reasoning and detail of his galactic background in the opening chapter, succeeds ingeniously in individual characterisation of reaction to abnormal events. Very briefly, the story concerns the method by which the Aliens, with admirable moral restraint plan their invasion of Earth. They select a handful of people at random from different points of the world and make them custodians of ultra-powerful weapons which will or will not, in a given period, cause the self-destruction of mankind, depending on the way the five characters use, or are forced to use, these weapons. What an idea for a novel! (Film rights inevitably sold before publication!) Make the five central characters an American reporter, an Englishwoman, a German scientist, a Russian soldier and a Chinese peasant girl, and the possibilities are infinite. Mr. Mantley (it is his first novel) brilliantly exploits this situation and even manages to contrive a neat and satisfactory climax. Full marks for originality, characterisation and story telling.

In my constant anxiety for the recognition of science-fiction as a generally accepted category of literary entertainment I am comforted from time to time by the emergence of articulate crusaders of whom our present champion, Mr. Edmund Crispin, erudite author of superior thrillers, appears to be by far the most formidably equipped. I found his introduction to *Best SF Two* (Faber & Faber, 15/-) as stimulating as his first essay in his previous anthology, and it is accurately and appropriately aimed at the "Occasional censorious literary pontiffs" and the outraged scepticism of "technological priesthoods." The ordinary and regular follower of science fiction may, like me, have to resort occasionally to a dictionary to follow Mr. Crispin's flowing prose, but in any case I feel that they already are convinced that all the better s.f. writers are born iconoclasts and brilliant thinkers, and that the panacea for every evil besetting the present world, the future world (and even all possible alternative worlds) is to be found in the pages of science-fiction.

Mr. Crispin wisely follows his own introduction with fourteen moderately successful stories by such authors as Heinlein, Bradbury, Wyndham, Kersh, Asimov, Bester, Clarke, Sturgeon, Brown, Pangborn, Kornbluth, Aldiss, Dick, and Simak. Not only does it guarantee a high level of entertainment, but it makes the transition seem less

obvious. For contrasting styles of science-fiction treatment this collection is pre-eminent and this series has immediately established itself for the prime annual science fiction anthology in this country.

Richard Matheson's **Born Of Man And Woman** (Max Reinhardt, 10/6d) is a collection of thirteen stories (selected from the seventeen in the original American volume) which can and do speak brilliantly for themselves. Most of these stories have, I think, been published in the commercial pulp magazines which, as Edmund Crispin says, are the "true repositories of science fiction for science fiction's sake," and if I may add to his remarks, I would include Matheson with Sturgeon and Bradbury whose "skill, imagination and literary finesse, had they chosen, could quite obviously have gained them success and recognition in far more profitable hunting-grounds." The impact caused by Matheson's first striking story, "Born of Man and Woman" is not lessened in any of the other tremendously atmospheric stories which follow, particularly in "Lover When You're Near Me," "Through Channels," "F—," and "Shipshape Home." By far my favourite, though, is the poetic justice (perfect example) awarded to the victim in "To Fit the Crime." Highly recommended.

Finally a brave attempt by I. O. Evans—a veteran addict—to white-wash, biographically and critically—the importance of Jules Verne as a pioneer in the science fiction field. The book is called **Jules Verne—Master of Science Fiction** (Sidgwick & Jackson, 12/6d) a "selection from his writings with a critical study." Frankly I never was able to read comfortably the science-fiction novels of Verne, whilst the majority of his books had no appeal whatsoever. Having sampled the carefully chosen excerpts from fifteen of his scientific romances which make up the bulk of this volume I see no reason to rectify the omission. One cannot deny Verne's honoured and deserved place in the pioneering of popular fiction, and his imaginative use of the beginnings of modern science must have provided the impetus for many an early author in the science-fiction field. But a century of literary and scientific progress must surely dispute the appellation "Master of Science Fiction." However, Mr. Evans is extremely fair about all this in his very interesting preface, and his book is a worthy addition to the shelf of the serious student of science-fiction.

Leslie Flood

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